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General Scientific

THE OPEN TREATMENT OF FRACTURES IN GENERAL.*

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This paper will be limited to the consideration of the open method of treating fractures in general. A detailed study of any series of fractures treated by the older methods through the application of splint, bandages, extension and other tormenting devices and the too often poor results obtained, must of necessity suggest to all of us that the open treatment should be more often used.

However, in this connection, we find ourselves compelled to consider certain social conditions. Is everybody ready to accept the open method of treatment? Has this method been sufficiently used, and has it yielded the proper results, so that it can be used in a greater number of cases than previously? Is it the proper procedure in all communities? The writer believes each one of these questions can be answered in the affirmative.

In coming to these conclusions we must review the statistics of those who have been pioneers in the work. Such men as Messrs. Lane and Milne of London; Murphy, Martin, Ochsner, Willard Bartlett and Cotton of our own country. Each one of these men has done a vast amount of work along this line and has been more or less successful. One need but watch Mr. Lane at his work on bone to realize his adaptation of its principles.

Accepting the statement that the open treatment of fractures is proper in many more cases to-day, the question arises: "When shall we operate?" Martin states that two conditions should govern our decision, namely: In those fractures that cannot be reduced by other methods; in those fractures that can be reduced but do not remain so. Possibly a third factor enters into the question (the ununited fractures).

No fracture can be accurately reduced or persisted in as reduced except by the use of the X-ray. This alone must guide us to a marked degree, in our motives. The X-ray shows the trouble, and proper reduction accompanied by persistence is the method to follow.

Again arises the question, "If we are to operate when shall we proceed?" Too early interference is not safe for two reasons, namely: Hemorrhage is best controlled only after five or seven days have intervened. After this period of time the injured area has so immunized itself that we are far less apt to get infection which is the dreaded thing in all bone work. The operation is performed for the purpose of accurately apposing the broken bone ends and of securely holding them in this position until they have grown together.

Martin states that certain general indications govern the open treatment of fractures, namely:

Surgical cleanliness carried to its furthest development; operating as soon as it is clear that this is needful; the securing of apposition with the least possible stripping of periosteum from bone, or soft parts from periosteum; the selection of an internal splint or support of the smallest bulk, and of the easiest application compatible with the strength and persistence of the fixation desired; instruments and appliances which make the application of the fixation apparatus chosen easy and non-traumatizing; the application of an external support which, during the period needful for union, prevents twisting and angling strains at the seat of fracture.

Surgical cleanliness is the first principle in bone surgery. We must be diligent in this regard from the very start of the preparation of the part until the skin wound is securely knitted. Special stress must be laid upon the pre-operative preparation. The hair is shaved from the part over an extensive area purposely clearing the skin of this growth for what might be termed an unnecessary distance. This is an important factor.

The skin is next thoroughly sudsed over the same extensive area. This suds is rinsed off with sterile water and the area cleansed with bichloride solution 1-500. The part is then wiped dry with a sterile towel and rinsed off with 70 per cent. alcohol. It is again wiped dry and a dry sterile dressing applied which is to be kept on over night.

In the operating room this same process is again repeated with great care, the part being widely fortified

*Read at 122nd annual meeting of the New Hampshire Medical Society at Concord, May, 1913.

with sterile towels. Following the final alcohol rinsing the part is thoroughly dried and then painted with full strength tincture of iodine. Too much stress cannot be put upon the diligence necessary in carrying out this preparation up to and including the final move. For illustration: if the foot or lower limb is the part involved, the superficial preparation should extend to the knee, and many times well up onto the thigh.

During the operation the fingers should not be put into the wound as this is the source of much occurring infection. The gloved hand does not insure one against the possibility of contamination. One can prove this for himself by noting that seldom even a new glove will pass through the operation where bone is involved, if the bone be handled, as the rough ends of the broken bone tear and penetrate the rubber finger tips. A glove which will not appear perforated can be proven to be so by inflating it with air and submerging it under water; when the escaping air, as shown by the rising bubbles, will be a surprise. Patched gloves should never be used for bone work. It is next to impossible to patch a glove so that it will not leak. Use proper instruments and keep the fingers out of the wound, is a good rule to follow in bone surgery.

When cutting down upon the seat of fracture disturb the soft parts overlying the periosteum as little as possible. Undue traumatism at this point means delayed union. One should always be cautious about stripping the periosteum from the bone. Strip as small an area as possible, and preserve the integrity of the bone covering. Here again undue traumatism prevents good union and causes delayed healing.

After the sea of fracture has been exposed all blood clots should be carefully removed by small gauze sweeps and forceps. This is essential as nothing makes so good culture medium as a moistened blood clot.

The seat of fracture having been exposed, apposition is secured by longitudinal pull, lateral traction, torsion and angulation. Any small pieces of loose bone should be carefully removed with forceps. After apposition is perfected we must choose the particular form of material for retention for the fracture personal. The same apparatus or material cannot always be used. Lane's bone plates or other modifications in shape and material, Milne's vanadium steel filament frame, Murphy's phosphor bronze wire, silver wire, kangaroo tendon, chronic catgut, et cetera, are the materials before us from which to choose. There are circumstances under which none of these materials will act to advantage and we must then resort to bone splint grafting.

For the past two or three years bone plates have been used very extensively in this country. The present or very recent enthusiasm in the use of plates was augmented by the writings of Mr. Lane of London. It might seem that all new devices must go through certain periods of hypothesis before their true usefulness can be known. This has been most true of bone plating. Bone plating seems to be most serviceable and to give very perfect results both in a reasonably perfect apposition and functional results when used in the proper type of cases. However, the use of bone plates has not been so entirely satisfactory that this method would make all other methods obsolete. We find such men as Brickner, Elsworth Elliot, Murat, Willis and Cotton have not depended upon this method to the degree which certain enthusiastic writings of others might infer.

At times the plates will bend or break and leave a bad matter worse. Plates break most often across the screw hole nearest the line of fracture. Again very unfortunate results have been found where the plates were adjusted too near the epiphyseal line, and young bone has been deformed or atrophy has set in as the result. Again these plates have to be removed in over 50 per cent. of the cases, thus necessitating a second operation and causing the surgeon to deal with a foreign body (because the screws loosen or the plates bend or break).

The London Medical Society made a very systematic investigation regarding the use of bone plates. The commission having this matter in hand returned a most conservative report upon the subject which condemned it to some degree.

It would seem that in this country it has fairly well adjusted itself, plates being used in proper cases and not in every case. We all feel certain that Mr. Lane gave us something new and most useful when he brought this matter to the attention of the surgical world. Bone plates are most useful in fractures of the shaft of long bones when the fracture is sufficiently distant from the epiphyseal line, so that no part of the plate will intrude upon continued bone growth.

Case 1.—Mr. C. Age, 47 years. Occupation, Laborer. *Diagnosis*—Complete, transverse fracture of the first metatarsal bone, left foot; *Before Repair*—Kangaroo Tendon used as suture material. X-ray by Dr. G. V. Fiske.

Mr. Milne of London has devised a very unique retentive apparatus which he calls a filament frame. This is made of vanadium steel wire and so constructed that it fits over each end of the broken shaft. He uses a special instrument for the adjustment, and from his talk it would seem most practical. This frame is adjusted beneath the periosteum and then entirely covered in, and he claims that it does not have to be removed.

For fractures involving or occurring near joints it would seem that Murphy's phosphor bronze wire, silver wire, kangaroo tendon or catgut is the material to be selected. Smaller and fewer holes need to be made,

Case 1.—Mr. C. Age, 47 years. Occupation, Laborer; *Diagnosis*—Complete, transverse fracture of the first metatarsal bone, left foot; *After Repair*—Kangaroo Tendon used as suture material. X-ray by Dr. G. V. Fiske.

although the parts are held very firmly. This is especially true if great caution be used in apposing the parts properly so that each spicule will dovetail properly insitu.

It would seem just to the patient to consider these suture materials for this class of cases when good apposition and firm retention is possible and not incumber the part with the extra burden of a bone plate. Using the lightest material possible to obtain good alignment, retaining apposed fragments and giving proper functional results seems a proper rule to follow.

In treating fractures of the phalanges, meta carpal and meta tarsal, carpal and tarsal bones, it would seem fitting to continue the use of proper suture materials, screws or nails. In fact kangaroo tendon will nearly always properly hold these bones in place. Some surgeons are depending upon the larger chronic gut sutures. Only a small drill hole is necessary, merely one sufficiently large to admit a small, carved, round needle. This material is later taken care of and no foreign, irritating element remains.

In the ununited fractures of the shaft of long bones, Murphy cites cases and publishes radigraphs showing that the bone plate merely held the parts in apposition, yet the fracture did not heal, non-union persisting.

Here a surgeon should resort to intra-medullary bone, splint graft as the best means for obtaining good results. Brickner, who has done such beautiful work along this line, must certainly be commended for his uniqueness in his modus operandi. Genetic elements are augmented in action and firm union results in a large majority of cases.

The result obtained by the operative treatment of fractures is that union is very often somewhat delayed, although the delay does not depend entirely upon the foreign material present (possibly not at all) but rather upon the amount of stripping of the bone ends and trauma of the soft parts at the time of operation.

There is no evidence to show that the period of after treatment before complete, or what we might call complete, restoration of function is accomplished, is materially shortened by the open method. It is the perfect or near perfect alignment and final good functional results that we are seeking, and here the open treatment serves us well.

In any case we cannot assert positively that a plate healing in place, without infection, will remain for life without giving trouble. However, there is reason to believe that it will do so and cases reported show it has for periods of from 4 to 20 years.

One should not become an enthusiastic advocate of the open method of treating fractures when satisfactory apposition can be secured by other means. The writer feels sure that if all the results of the present wave of enthusiasm could be collated, they would not reflect credit upon either the method itself or upon the surgeon applying it.

Certain things are absolutely necessary, namely; scrupulous surgical cleanliness, a natural gentleness in handling tissue, and the wise choice of instruments and plates or other materials. These are quite as important as the manual dexterity of the surgeon.

In concluding, I take the liberty to report a few cases for the purpose of illustrating some of the points put forward in this paper.

Case 1.

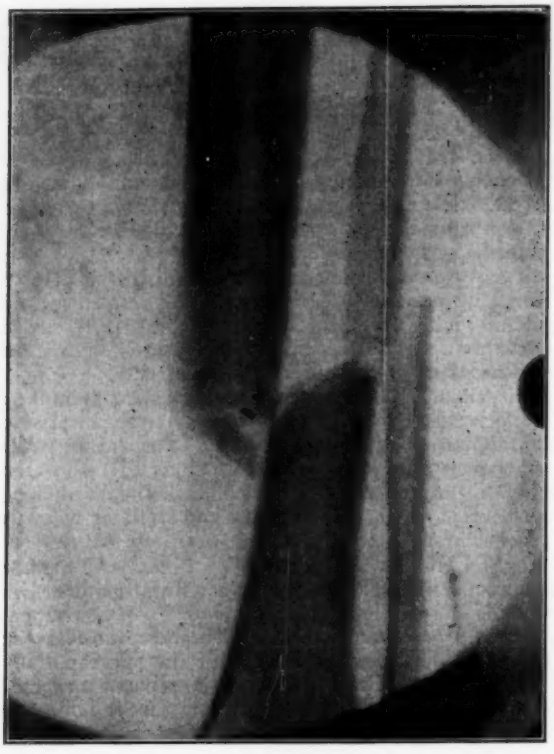
Mr. C. Age 47 years. Occupation, laborer in shipping department of shoe factory. Family and past histories unimportant.

Present Illness—February 25, 1913, while about his usual work a large shipping case, weighing 150 pounds, fell, the edge striking squarely across the dorsum of the left foot. He was immediately incapacitated and was taken to his home in a carriage. This happened in the early evening and I saw him soon after he arrived at his home. At this time he complained of severe pain at the point of injury.

Examination—Inspection showed no discoloration, very little swelling and almost perfect function of the entire foot. *Palpation* elicited pain at the seat of injury yet no crepitus was evident. Localized tenderness unaccompanied by loss of function, seemed the most important evidence of injury.

Realizing the probability of fracture of one or more of the metatarsal bones, I put the part up in a retentive dressing, put the patient to bed, keeping the injured member well elevated in a pillow trough and awaited further developments. After the acuteness of the injury had subsided some crepitus could be felt and I had the part radiographed. All of this time there was no discoloration, very limited amount of swelling, yet the ability to functionate became markedly lessened.

The radiograph showed a complete, transverse fracture of the first metatarsal bone of the left foot. The picture showed displacement to a degree sufficient to cause permanent disability if it healed in situ. The patient was moved to the hospital and the fracture treated by the open method. Bone spicules well dovetailed permitted good apposition. One medium kangaroo tendon retained the fragments in place. A posterior right angle plaster splint was applied to the leg and foot extending from a point three inches below the knee to two inches beyond the ends of the toes, thus serving the double purpose of support and protection



Case 3.—Mr. M. Age, 34 years. Occupation, Delivery Man; *Diagnosis*—Complete, double, transverse fracture of tibia and fibula. Deformity marked. Junction middle and lower third.

from the weight of the bed coverings. The patient was then put to bed with the member elevated on an inclined plane in a pillow trough.

Practically, no swelling followed this procedure, and the part healed without further difficulty.

CASE II.

Master A. Age 12 years. Occupation student.

P. I. Fell from an apple tree a distance of eight feet striking upon the left shoulder, neck and chest. Immediate disability of left arm, much pain and shock. I was called to see the case in consultation with Dr. M. P. Badger.

Examination—Inspection revealed much deformity of the left shoulder, deltoid flattened, left forearm supported by right hand, complete loss of active function. Palpation revealed flat, spastic deltoid, latissimus dorsi and pectoral muscles. No crepitus was evident. Passive motion nil. Much pain elicited by any handling. *Provisional diagnosis* sug-glenoid dislocation possible fracture.

Treatment—Under ether I attempted to reduce the dislocation and put the part up in Sayre dressing with properly fitting axillary pad. The next day it was revealed that the procedure was a complete failure. Two succeeding attempts were made with like result.

Upon advice the patient was removed to the hospital and the part cut down upon. The muscles were separated and the biceps tendon drawn aside. Blood clots were cleaned out and the globular head rotated back into line and the parts retained in proper alignment by two silver wires. The part was then put up in a triangle axillary splint pad superimposed by a Sayre dressing. A slight drain was left at the lower, dependent angle ot the incision. Recovery was rapid and the drainage removed on the fourth day.

Massage and guarded passive motion was instituted on the eighth day with daily progress.

Photographs show the functional ability at the end of twenty-one days.

CASE III.

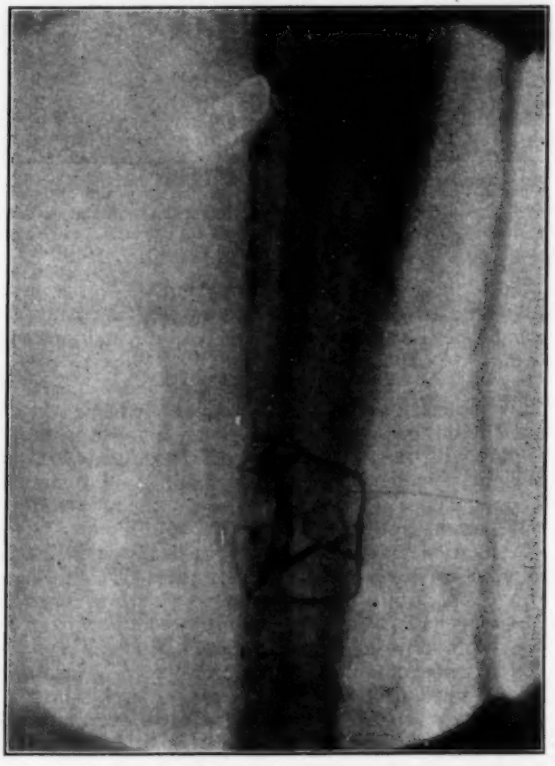
Mr. M. Age 34 years. Occupation deliveryman.

P. I. Was kicked squarely in the shin by a frightened horse. Immediate disability, pain and deformity of injured part.

Examination—Inspection revealed much deformity at junction of lower and middle third of tibia and fibula. Palpation elicited crepitus and mobility of broken ends.

X-ray by Dr. Fiske showed complete, double, transverse fracture tibia and fibula at junction of middle and lower third.

Treatment—The part was cut down upon, blood clots removed, raw ends approximated with good alignment. Held so by silver wire twist and mesh. Part put up in plaster housing extending from ends of toes to four inches above knee. This housing was bivalved to facilitate examination ad libitum. Normal convalescence and to-day, ten weeks from time of injury, patient is up and about. No shortening and perfect function without deformity.



Case 3.—Mr. M. Age, 34 years. Occupation, Delivery Man; *Diagnosis*—Complete, double transverse fracture of tibia and fibula, Deformity obliterated. Junction middle and lower third. Open treatment. Silver wire twist and mesh.

CASE IV.

Mrs. M. Age 52 years. Weight 180 pounds. Occupation housewife.

F. H. and *P. H.* Unimportant except for alcoholic taint.

P. I. During debauch fell down stairs striking heavily upon right shoulder. Immediate disability and loss of function. Professional services not entertained for six weeks.

Examination at this time (six weeks after injury) revealed marked deformity of right shoulder. Complete ankylosis of shoulder joint. Marked swelling. Practically no plant. The X-ray revealed a complete, oblique fracture surgical neck right humerus. Subglenoid dislocation, chondrigenous union and chondrohypertrophy with complete filling of the glenoid cavity.

She was advised to have an operation and consent given. Removal to hospital.

Treatment—The part was cut down upon, muscles separated, biceps tendon drawn one side and great vessels protected. The cartilaginous overgrowth was resected from the fragmentary ends and the glenoid cavity. The broken ends were freshened by the saw and file. Approximation completed to perfect alignment and held so by silver wire. Drainage instituted.

The part was put up in Sayre dressing with forearm free in sling. Fair convalescence with slight amount of purulent discharge. To-day function is restored to sixty degrees passive motion and some rotation. It is hoped that diligence and perseverence will result in more or less complete function.

967 Elm St.

THE ACID TEST IN THERAPEUTICS.*

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Philadlephia.

In selecting a topic for discussion at this meeting, I have been guided by a desire to establish certain fundamental principles as a basis or foundation for clinical research. Plotting the field of operations, it will be admitted, is well calculated to promote, if it does not secure, harmony and co-operation, and it requires no stretch of the imagination to believe that the chemic problem in nutrition overshadows in importance all other questions; *hence, the significance of the acid test*—to determine the pathologic equilibrium as well as the chemic status of the body fluids and tissues. Although every physician is supposed to be thoroughly familiar with the scientific facts relating to acids and alkalies, as laid down in our text-books on physiology and chemistry, there is a dearth of information concerning the effects attending chemic deviations in the body fluids, blood and lymph. Thus, special attention has been given to the stomach in the case of hyperchloridia without any efforts being made to correct or remove the effects—in the form of obscure, nervous phenomena—directly traceable to the "habit" of the system which has given rise to the acid excess.

The obscurity connected with kidney disorders supplies an apt illustration—while they have been differentiated and studied in detail, we still have no definite and demonstrable data to offer in the matter of treatment, simply because we have not yet fathomed the mystery of the causative factors responsible for their appearance. Indeed, the present outlook is rather discouraging—when it is claimed that kidney disease itself is the cause of the coincident or consecutive arteriosclerosis, whereas the kidney disease is but a local manifestation of constitutional derangement. A critical study of the chemic relations must convince the impartial student that Bright's disease is curable, in the sense that neuritis and neuralgia are curable. That is to say, a diminished alkalinity of the blood passing through the kidney tissues has interfered with function and destroyed structure—in other words, an excess of acid has produced organic disease.

*Read before the American Association of Clinical Research Nov. 9, 1912.

While hyperchloridia and so-called Bright's disease are chronic ailments, they represent essential conditions common to all disorders, acute, subacute and chronic, functional and organic, and the complication incident to bacterial invasion requires no special line of demarcation, since the acid test still retains its ascendency.

The nature and significance of acid excess will be readily understood by a brief recapitulation of certain well known chemic changes incident to metabolism, as follows: The blood, under normal conditions is alkaline in reaction; the lymph, together with the chyle, which unites with it in the thoracic duct, are also alkaline; likewise, the products of glandular activity, except the kidneys, so that the up-building processes (anabolism), are constantly alkaline. Additional evidence in support of the proposition is to be found in the tissues—alkalescence is their normal status.

With a single exception, the gastric fluid, all retrograde changes (katabolism), are characterized by acid reaction, acid urine, acid perspiration and acid mucus. Therefore, the deduction is warranted that the normal condition incident to anabolism is alkalescence, while acidity is normal as regards katabolism. Not only in the cases mentioned, but in every case, the presence of acid in excess must lead to impairment of function, and ultimately, to changes in structure. In all such instances, therefore, the therapeutic diagnosis points clearly to the employment of remedies for the purpose of neutralizing acid excess.

The significance of this chemic deviation, however, cannot be appreciated from the mere didactic statement of its existence, although it is no longer an academic question, awaiting the decision of a jury selected to determine the weight of the argument, pro and con, because the effects are definite and demonstrable—by clinical evidence, confirmed by instruments of precision.

Here, we enter an unexplored region. The landmarks outlining the vast territory, as already mentioned, have been standing for generations, yet no one has had the temerity to venture beyond its borders—unless we except Sylvius and his followers of the iatro-chemical sect, who made some tentative discoveries, little understood, nearly two hundred and fifty years ago. Viewed in the light afforded by modern scientific research, this "find" gives promise of rich rewards to the clinician—through its direct influence upon health maintenance. Besides, in the treatment of disease, two factors of paramount importance have been added to our therapeutic armamentarium—simplicity and efficiency.

Having now pointed out the relative functions of acids and alkalies, in the human economy and advanced the hypothesis of acid excess leading to injurious effects, even organic changes, it remains to show the practical application of the acid test as a guide in therapeutics; in other words, it is a question of adaptability.

As a preliminary, it will be the part of wisdom to state definitely the effects arising from acid excess, a convenient term to designate a diminished alkalinity of the blood. Taking intestinal indigestion for the purpose of illustration, we know that it means fermentation of the undigested starchy food-stuffs, together with decomposition (probably), of nitrogenous material which has escaped from the stomach, so that to the acid incident to fermentation, we have added the acid arising from microbic invasion (multiplication). As a consequence, the urinary acidity is increased, the perspiration is more acid than normal—and may be augmented, while the output of mucus is greater, along with hyperchloridia, all going to show the conservatism of nature

in her efforts to relieve the intestinal embarrassment, an alkaline or neutral medium being essential. Testing the blood under these conditions will show diminished alkalinity, which lessens its oxygen-carrying capacity and interferes with oxidation. Consecutively, we have diminished alkalinity of the lymph, the lymph-glandular apparatus being impaired, which seriously deranges the leucocytic function and permits multiplication and distribution of bacteria and their toxins, not to mention the dangers from cycotoxins.

The demonstrable effects of acid excess are to be found by a study of metabolism—in respect to the absorption, transportation and elimination of certain inorganic, proximate principles, especially calcium and magnesium. Thus, the acid excess incident to intestinal indigestion depletes the lime content of the tissues, leading to various nervous symptoms, including anemia and lack of bone-making material. In convalescence, for example, a diet composed largely of crackers, is responsible for delayed recovery, and not infrequently, relapses may be traced to an unsuitable dietary—which favors or permits lime depletion.

This is well illustrated in the accompanying tabulation, adapted from the monograph, *Calcium, Magnesium and Phosphorus in Food and Nutrition* (by Henry C. Sherman, Arthur J. Mettler and J. Edwin Sinclair, of the Department of Chemistry of Columbian University, Washington, D. C., 1910), covering an experiment in metabolism, the dietary being limited to crackers and water. In the adaptation, phosphorus and nitrogen have been omitted; grains have been added to show the metric equivalent. The explanatory details follow:

"This experiment was begun at 7 a. m., June 3, 1906, and continued three days. In order that the bodily condition of the subject should be as nearly as possible the same as in the second experiment, the diet of the three days preceding the third experiment was the same as in the first experiment, viz., 1,500 grams of crackers and 1,500 grams of milk per day.

"The weight of the subject (without clothing) was approximately 62.7 kilograms (138 pounds), at the beginning, and 61.8 kilograms (136 pounds), at the end of the experiment. The initial weight was therefore practically the same in this as in the second experiment, and the loss of 0.9 kilogram during the three days was probably due as largely to the hot weather as the deficient fuel value of the diet.

"The daily diet consisted of 450 grams of the same lot of soda crackers as were used in the first and second experiments, with an average of 1,200 grams of distilled water per day. The crackers supplied 43.9 grams protein, 44.7 grams fat, and 339 grams carbohydrates, the total fuel value being 1,930 calories.

"The average daily income and outgo of mineral constituents * * * are shown in the following table:

TABLE SHOWING LIME DEPLETION (CRACKER DIET*).

Kind of Material	Calcium Grams	Oxide Grains	Magnesium Grams	Oxide Grains
Food per day:				
Bread (crackers)	0.126	1.89	.079	1.185
Distilled water	....	.....	....	....
Total daily income	0.126	1.89	.079	1.185
Feces:				
Total for three days	3.690	55.350	.379	5.685
Average per day	1.230	18.450	.126	1.890
Urine:				
First day (June 3-4)	.062	.930	.086	1.290
Second day (June 4-5)	.044	.660	.095	1.425
Third day (June 5-6)	.056	.840	.098	1.470
Total for three days	.162	2.430	.279	4.185
Average per day	.054	.810	.093	1.395
Total outgo per day	1.284	19.260	.219	3.285
Loss per day	1.158	17.370	.140	2.100

* Adapted from the tabulation, "Income and Outgo of Mineral Constituents in Metabolism Experiment, No. 3 (serial No. 13)"—loc. cit., p. 33.

By way of comment, the authors say:

"During this experiment, the food did not become so distasteful as during the second, but there was some lack of appetite and at times a slight feeling of fullness and thirst after meals. There was also in this, as in the second experiment, a slight tendency toward looseness of the bowels."

Special attention is directed to the evidences of intestinal indigestion, "lack of appetite," with "a feeling of fullness and thirst after meals;" but the effects, in the form of lime depletion, were "conspicuous," simply because the lime being the stronger base it combines more readily with the acid than magnesia. Hence, the preponderance of lime depletion signifies the substitution of magnesium, and since magnesium nucleo-proteids lack the property of imbibition, it follows that magnesium infiltration hinders tissue change and tends to impairment of function. In other words, lime depletion incident to acid excess results in chemic transformation, the organized nucleo-proteids being changed into magnesium nucleo-proteids, which interferes with function and may produce or give rise to death of the cells.

In the case of intestinal indigestion, therefore, we are confronted with three distinct conditions or deviations from normal, namely, (1) impairment of the digestive capacity; (2) acid excess, shown by the "tendency to looseness of the bowels;" and (3) magnesium infiltration. The corrollary relating to treatment then, is a logical sequence:

1. Restore the digestive capacity;
2. Neutralize acid excess;
3. Promote magnesium dissociation.

A convenient and reliable method for determining excessive acidity is to be found by testing the salivary secretion with blue litmus paper, or by testing the reflexes, the knee-jerk for example.

It will not be out of place in this connection to point out the serious disadvantages attending medical treatment, and particularly convalescence, when the dietary is not properly "balanced" as regards lime and magnesia. At the same time, it is pertinent to mention that the "sloppy" dietary, so popular at the present time, may be responsible in a measure for much of the prevalent illness—especially diseases of the nervous system, the goal in disorders of nutrition.

Other factors intimately connected with this study relate to the daily average intake of acids, sulphuric and phosphoric, in the food eaten; the daily intake of chlorin, and also the average daily intake of lime and magnesia, together with the variations according to the food selected, but I have elsewhere (*The Chemic Problem in Nutrition,* Philadelphia, 1912) discussed these questions in detail, covering substantially all the ailments in which the chemic deviation is the essential element, the line of demarcation between health and disease. When it is stated that these chemic changes or transformations illuminate and make plain and comprehensible the pathology of arterio-sclerosis, neuritis, neuralgia and neurasthenia, the intrinsic value of the acid test in therapeutics must be apparent. Add to this, diseases of children, infectious and non-infectious, and we begin to grasp the significance of its importance in solving the chemic problem in nutrition—because it makes for simplicity and efficiency.

To keep an ice-bag in position, use a bandage or wide piece of muslin, making a hole in the center of it just large enough for the round cap to be admitted; then bandage two or three times around, leaving the cap free.

A CLINICAL LECTURE

given in the

Long Island College Hospital, June 5, 1913.

HENRY H. MORTON, M. D.

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE LONG ISLAND COLLEGE HOSPITAL, AND GENITO-URINARY SURGEON TO LONG ISLAND COLLEGE AND KINGS COUNTY HOSPITALS AND THE POLHEMUS MEMORIAL CLINIC, ETC.

Brooklyn, N. Y.

CASE I.

Enlargement of the Testicle.

The first case which I wish to present to you to-day is one of interest from a diagnostic point of view. It is a solid, hard tumor in the scrotum and is an enlargement of the testis or epididymis, or perhaps both, with an accumulation of some fluid in the sac of the tunica vaginalis.

The history of the case in brief is as follows:

The patient is a sailor and on entering the hospital he stated that in climbing a rope he slipped back and injured his testicle, which became swollen and very painful. On coming into the hospital there was a considerable accumulation of hydrocele fluid around the testicle. The left testicle itself was enlarged. The patient stated that he had never had any disease of the testicle until this injury. The Wassermann and Von Pirquet reactions are both negative.

The diagnosis of the character of tumors in the scrotum is ordinarily easy to make by proceeding in a systematic way with the examination, but every now and then we meet with a case where it is necessary to incise the scrotum and expose the testicle before the diagnosis can be made.

In the ordinary systematic examination of a tumor of the testicle it is necessary, first, to determine if the enlargement be in the testis proper or in the epididymis, or if the enlargement be a hernia, hematocele or a variococele. Hydrocele must also be considered, and it is necessary to know whether it is a hydrocele of the tunica vaginalis or of the spermatic cord.

In the differential diagnosis the history often throws an important light on the subject. The age, the general condition of the patient and a family history of tuberculosis are important to ascertain, as well as any previous manifestations of tuberculosis in the lungs, bones, joints or genito-urinary tract. Inquiries should be made as to the length of time the growth has existed; if it grew slowly or came on suddenly and if reducible. The character and amount of pain are important. A history of traumatism may throw light on the case. Gonorrhea and syphilis also play an important role in causing enlargements of the testicle. We should inquire as to the previous treatment, if any has been had, and particularly as to the effect of tapping the enlargement, if fluid were drawn off. We should also inquire as to the effect of inunctions of mercury and if Iodide of Potash was used in large doses.

Examination of the case should be proceeded with in a systematic manner, first, by palpating the outline of the body of the testicle and separating it from the epididymis. We should outline the shape, size and density of the tumor, with reference to its fluctuation, elasticity or stony hardness. We should note if the spermatic cord is enlarged and if the tumor can be reduced in the abdomen. At the same time the condition of the inguinal ring should be investigated to see if it is open and enlarged and, if possible, we should try to notice if an impulse is present on coughing. The condition of the scrotal veins should be ascertained with the patient in the standing position, as a varicocele always disappears as soon as the patient lies down. The symptom of translucency, when present, is of great diagnostic value. It is obtained by viewing the tumor through a roll of paper with a light on the opposite side, and in the presence of fluid the light is reflected in a pink translucent manner through the clear walls of the fluid. In the presence of a solid tumor, the light does not shine through and the symptom of translucency is wanting. Other conditions may interfere with the symptom of translucency, such as thick sac walls, which would prevent the transmission of light, and blood, filling the sac of the tunica vaginalis. A purulent condition of the hydrocele fluid will also prevent the transmission of light, as well as a chylous content of the hydrocele sac. In the tropics, where filaria often causes hydrocele, the fluid is thick and the light does not pass through. Puncture of the tumor with an aspirating needle is always a safe diagnostic step. The puncture never does any harm and often clears up the diagnosis as to the character of the fluid or its absence, and after the fluid is withdrawn the testicle itself is easily palpated.

In recent years the laboratory tests have been of great benefit in assisting to make a diagnosis of syphilis or tuberculosis. A positive Wassermann and the presence of a large, smooth, oval tumor in the testicle speaks infallibily for syphilitic enlargement of the testicle, while a positive Von Pirquet reaction and the presence of a small, hard nodule in the epididymis is strongly indicative of a tubular epididymitis.

When in spite of the methodic examination just described doubt still exists, the patient should be prepared, etherized and a free incision made over the tumor. When the enlarged testicle is brought out of the wound the diagnosis can be made and the growth can be dealt with as occasion requires.

In the present case, having failed to make a diagnosis by the ordinary means just described, we will cut down upon the testicle and bring it out for inspection and palpation.

Operation.—The testicle is now brought out into the wound and an incision made through the epididymis, which is split longitudinally. The epididymis is found to be riddled with small miliary abscesses and in a state of complete disorganization. Incision through the body of the testicle shows it to be filled with small, round yellow points resembling miliary tuberculosis which has not yet broken down. The disorganization of the epididymis and the infiltration of the testicle are so complete that it is impossible to save the testicle and a castration must be done.

There is one point to which I would call attention in this operation of castration. Formerly we were in the habit of cutting the vas deferens and cord at the same level; the stump of the vas deferens remained in the wound and it was not of infrequent occurrence for infection of the wound to take place ten days or two weeks after operation. This was unquestionably due to the discharge of infectious material retained in the seminal vesicle and discharged through the open end of the vas deferens into the wound. To avoid this secondary infection we have of late years been in the habit of leaving the vas deferens a couple of inches longer than the cord, burning it through with a Paquelin cautery to seal the open end and then bringing the end out of the wound upon the skin and holding it in place with a suture so that any discharge will take place outside of the wound. Since adopting this practice, secondary infection of the deeper wound through the

epididymis has not occurred, and we consider it a decided improvement in the technic of castration, especially in tubercular cases.

We will send the specimen to the laboratory for examination and at a later date will report the laboratory diagnosis.*

It is evident from the history that the tubercular nodules must have lain latent and unsuspected in the testicle and epididymis until the traumatism lighted them into activity, to the result of the rapid destruction of the organ.

CASE II.

A Case of Fistulous Opening in the left hypogastrium, opening up the space of Retzius and communicating into the bladder.

This man was operated on for a stricture of the urethra by external urethrotomy, in one of the other hospitals in Brooklyn. He entered this hospital about a week ago. We found the following condition:

You see a large fistulous opening in the lower left side of the abdomen, through which the finger can be introduced into the space of Retzius.

All of the urine, mixed with pus and blood, is passed through this opening and he has also had several free hemorrhages from the fistula.

There is a wound in a perineum from the former external urethrotomy which is almost closed and the stricture of the urethra has recontracted so that it is only possible to pass a very small instrument through it into the bladder.

The man is in a wretched condition and very feeble, and it is impossible to do much for him in the way of an operation.

I feel that the only chance to save his life is to stop the septic absorption from his bladder and keep the urine from discharging through the fistulous tract in the abdomen, and with that idea I am going to do a rapid external urethrotomy. He is too weak to stand a general anaesthetic and I shall use novocain injected under the skin of the perineum, which will anaesthetize the parts sufficiently for all purposes.

I feel sure that if we can divert the flow of urine from the fistulous tract and keep the bladder empty for a fortnight or three weeks his condition will improve so that we can eventually close the suprapubic fistula, unless, as is not unlikely, it will close spontaneously.

I spoke of using novocain as a local antesthetic. For some time past I have been using novocain in favor of cocaine. The object in using novocain or alypin is on account of the absence of toxic symptoms following their use. Every one who does much genito-urinary work, once in a while meets with a case where cocaine acts badly and sometimes causes toxic symptoms and collapse. With alypin toxic symptoms are said not to occur at all, and so far, in my limited experience, it acts perfectly well as an anesthetic, and the patients are perfectly free from toxic symptoms. Alypin is a favorite drug in this country and novocain is the favorite on the other side.

Operation.—A lithotomy staff was introduced into the bladder; Novocain injected under the skin of the perineum. A straight thin bistoury was thrust through the perineum down to the lithotomy staff, the point striking the groove in the staff and then was pushed along the groove into the bladder, dividing the tissues sufficiently to admit the gorget. The finger was then introduced and the incision dilated so that the finger could be carried into the bladder. Exploration of the bladder with the finger showed no stone, nor could the opening which communicates with the suprapubic fistula be detected. A large perineal tube was introduced through the perineal incision and the bladder drained. The patient will be put upon a stimulating diet and with constant drainage keeping the bladder empty. I hope that in the course of two or three weeks he will regain sufficient strength and vitality to permit of an exploration and eventual closure of the suprapubic wound.

*Prof. Murray reports the testicle removed is tuberculous.

CASE III.—Vegetations Around the Anus.

The next case is that of a boy sixteen years of age, who came into the hospital with vegetations around the anus. At first glance they resembled the condylomata of syphilis, but a closer inspection showed that instead of having the broad, flat bases which the syphilitic condylomata have the growths arose from small pedicles attached to the skin. An unusual laxness and dilatation of the anus aroused suspicions and on inquiry the boy confessed that he had been used for sodomy by a man for some months. The vegetations were of the character which one often finds under the prepuce and are simply due to outgrowths of the papillary layer of the skin as a result of the moisture and warmth applied to a tender surface. They are in no sense due to syphilis and merely resemble the warty growths which come upon the integument, but they have grown luxuriantly as the result of favorable conditions.

Operation.—Patient in the lithotomy position. Growths grasped with a ring forceps and bases burned through with Paquelin cautery.

CASE IV.—Chancroids.

I am presenting the next case for the purpose of demonstrating a new method of cauterizing chancroids, which I first saw practised in Berlin in 1911 in the Charitè.

Long before the discovery of Ducrey's bacillus it was considered the best treatment under certain conditions to cauterize the chancroid for the purpose, as was then expressed, of converting a specific sore into a simple ulcer. The discovery of Ducrey's bacillus as the exciting cause of chancroid is a matter of only a few years ago, but we still resort to the practice followed by the ancient surgeons of cauterizing the chancroids when they are recent. Cauterization destroys Ducrey's bacillus and converts the sore into a simple ulcer, which heals kindly and without complications.

Of the caustics in use a long list might be made. The caustic action of nitrate of silver is not sufficiently destructive and it simply makes a scab, which prevents the escape of Ducrey's bacillus and forces it into the lympathic vessels to be carried to the glands. A more powerful caustic is required, one that will penetrate deeper. Acid nitrate of mercury, pure nitric acid and the actual destruction by the Paquelin cautery are all suitable destructive agents and can be used with advantage. But the caustic which I prefer to use is the Chloride of Zinc paste. It is prepared by mixing a few drops of water with powdered Chloride of Zinz and applying it to the chancroid with a glass rod. It is to be left on for three minutes and then wiped off with dry gauze. Its action is selective. It seems to seek out the portions of the sore infiltrated with Ducrey's bacillus, cause their destruction and after it is used a black scab forms which is thrown off spontaneously in forty-eight hours, leaving a healthy granulating sore, which heals in a week. It is, to my mind, by far the best means of cauterizing the chancroid which I have ever used.

As to the question of cauterizing chancroids, as a

rule, we must individualize our cases. If the chancroid is partly located under the prepuce and cannot be entirely exposed, it is useless, nay, it is harmful to increase the existing irritation without being able to destroy the chancroid *in toto*. If the chancroid is located under the prepuce, destruction of the chancroid may cause phimosis, swelling and subsequent gangrene. Very marked inflammatory action on the part of a chancroid may be regarded as a contra-indication. It is also quite useless to destroy a chancroid which is already cicatrizing and healing, for the probabilities are that Ducrey's bacillus has already disappeared, and the cauterization in such a case has no point.

The presence of a bubo is regarded by some also as a contra-indication to cauterizing, since Ducrey's bacillus has already been carried to the inguinal glands and it is too late to prevent this complication. If the chancroid is seen early and cauterization is effectual, bubo does not occur and the time of healing is very much shortened.

32 Schermerhorn Street.

IS TUBERCULOSIS DECREASING?

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Mr. Elmer E. Rittenhouse, Conservation Commissioner of Equitable Life Assurance Society, published in the New York *Times* of June 25th last, and more recently in the Society's journal, *The Human Factor*, certain diagrams and statistics concerning the increase of diseases of the heart and kidneys and decrease of tuberculosis of the lungs. These statistics have been copied by many publications, none of which has, so far as the writer knows, challenged the accuracy of the assertions put forward by the Equitable's Conservation Commissioner.

For purposes of brevity, this article deals exclusively with the so-called decrease of consumption, and omits entirely the question of increase of heart and kidney disorders. It must not be supposed, however, that the writer for one moment accepts the doctrine that the latter diseases are now causing far more deaths than they ever did before.

According to one of Mr. Rittenhouse's diagrams, tuberculosis of the lungs has, in the United States Registration Area, decreased forty-nine per cent. between 1880 and 1908. No word appears as to the extent or population of the U. S. Registration Area in 1880, or in 1908, consequently every reader of the Conservation Commissioner's statistics must necessarily assume that this area covered the same territory in the former year as in the latter, and that the increase in population has been limited to the natural growth. This, however, is a mistake. The United States Registration Area of 1880 included only two entire States—Massachusetts and New Jersey—the District of Columbia, and a number of cities in non-registration States. It included only 8,538,366 persons, 17.0 per cent. of the population of the country at that time.

This area has been gradually extended until, in 1908, it took in seventeen States, the District of Columbia and seventy-four cities in non-registration States, the whole area comprising 45,028,767 inhabitants of continental United States, 51.8 per cent. of the entire population. No argument is necessary to demonstrate that a comparison of the mortality from consumption of such very different areas, the area of 1908 containing more than five times as many people as that of 1880, is invalid, and proves nothing whatever. In addition, it is necessary to remember that prior to Koch's discovery of the microbe which causes tuberculosis (about the year 1882), the word "consumption," now restricted to tuberculosis of the lungs, meant almost any wasting disease, and that some of the causes of death registered before 1882 as "consumption" are now known to have been in no way connected with the microbe which is responsible for tuberculosis. Again, tuberculosis of the lungs is more prevalent in cities than in rural districts, and the registration area of 1880 included only the rural districts of Massachusetts and New Jersey, while that of twenty-eight years later comprised the rural portions of fifteen States, in addition to the two States named. Finally, there can be no reasonable doubt that in 1908, as a direct result of city ordinances providing for the reporting of all living cases of tuberculosis of the lungs —which ordinances are systematically ignored in some places—"consumption" is often registered, after death has occurred, as pneumonia, broncho-pneumonia, chronic bronchitis, etc. Dr. Irwin, of Phipps Institute, Philadelphia, has published a long list of names of diseases which, in Philadelphia appear on death certificates as substitutes for some form of tuberculosis. No competent observer believes that the deaths recorded in the United States registration area as due to tuberculosis of the lungs, either in 1908 or in any other year since the disease became "reportable," represent the total number of deaths from that malady. Indeed, that tuberculosis is often called by other names after death has taken place is admitted in the U. S. census office report for 1907, p. 498. In England, where accurate statistics are kept, and where fraudulent registration of deaths is a rarity, the registrar-general asserts that there has not been "any very marked change in the rate of decline of mortality from tuberculous disease since 1884." (Letter dated October 9, 1910.)

The report of the consulting statistician of New York State (Professor Walter F. Wilcox, of Cornell University) for year 1910, says: "Neither in the city (New York) nor in the rest of the State has the proportion of deaths due to this cause (tuberculosis) undergone any steady and material reduction during the decade 1900-1909." Mr. Rittenhouse, however, has published a diagram which is intended to show that the mortality from consumption in Greater New York has decreased from 35 per 10,000 of population in 1877 to 21.4 per 10,000 in 1907. As a matter of fact, no man can say what diseases the term "consumption" included in 1877, and to compare deaths recorded as due to "consumption" in that year with those registered as attributable to tuberculosis of the lungs thirty years later, either in Greater New York, or elsewhere, is altogether unjustifiable. Dr. Tatham, of English registrar-general's office, has issued a warning against such comparisons, which warning may be found in report of U. S. census office for 1907, p. 499.

In Greater New York, in 1907, there were reported 19,725 cases of living pulmonary tuberculosis, with 10,262 deaths from all forms of tuberculosis. In the following year a State law came into force which requires every person who knows of a case of tuberculosis of the lungs to report it to a designated authority, the penalty for failure to do so being a fine of $100. In 1910 the reported living cases of the pulmonary form of the disease were 32,065, with 10,075 deaths from all forms of tuberculosis. The decrease in the number of registered deaths, notwithstanding a considerable increase of population in Greater New York, does not indicate an actual decrease in deaths of persons whose homes are in that city, for very few sufferers from tuberculosis of the lungs remain in New York City after

becoming tuberculous, if they have enough money to go away. Many die in Colorado and California, but their deaths never get into the records of their home city. Again, many foreign-born residents of New York who have been counted in U. S. census leave this country for their native land as soon as they become sick, often with tuberculosis, and do not return. Their deaths, of course, are never registered in New York City. On a single steamer from Boston to Naples forty apparently tuberculous Italians were counted by a very competent physician, Dr. Maurice Fishberg, of New York.

The above facts, while not absolutely conclusive, indicate that tuberculosis is not decreasing in the United States, or in New York State, any more rapidly than it was twenty-five years ago.

In New York State, the death rate from tuberculosis is not decreasing faster than the average death rate for all other diseases, if the registered deaths can be regarded as a guide. Quoting from Professor Willcox (*Special Report on Vital Statistics*, dated Aug. 1, 1910): "No influence of the special campaign against tuberculosis can be traced in the figures." This expression refers, of course, to New York State only.

One naturally asks why it is that the campaign against tuberculosis, which has now been carried on for a number of years, has had so little result? The answer is: because every factor in the causation of the disease, except contagion, has been neglected, some writers, notably Professor Irving Fisher and Dr. Newsholme, going so far as to assert that what is usually called racial susceptibility is chiefly the action of the environment, that is, great exposure to attacks of tubercle bacilli through residence in unhygienic surroundings. Further, hereditary tendency toward tuberculosis—insufficient power on the part of some portion of the body to resist inroads of the microbes of the disease—seems to receive far less attention than its importance demands. In 1907, Professor Karl Pearson, of University College, London (England), investigated "the complete record of 384 family stocks in which tuberculosis had occurred, and he reached the conclusion that, although infection played a necessary part, it was subordinate to that of inheritance in the families investigated. He considered it doubtful if the risk of infection can be escaped except by the absence of the diathesis—that is, by what amounts to the counterdisposition." (*Lancet-Clinic*, Cincinnati, May 20, 1911.)

Professor Pearson's views are supported by statistics taken from the Report of the Surgeon-General of United States army for 1910. As the hygienic surroundings of white and colored soldiers are in no way essentially different, the greater tuberculosis mortality among the colored troops cannot be purely environmental. It must be remembered, however, that there were at the time the Surgeon General's latest obtainable report was printed only 1,961 negro soldiers in the country (continental United States), while the number of white troops in the same territory was 55,347. The ratio of deaths, from all forms of tuberculosis per 1,000 soldiers (taking average strength of regiments) was, white men, 0.63; colored, 1.04. Ratio of tubercular non-effectives per 1,000, white, 3.23; colored, 6.07. Ratio of discharges for tuberculosis, white, 2.04; colored, 3.63 per 1,000 soldiers during calendar year 1909.

In giving a mustard bath the required amount of mustard should be put in a small muslin bag and then put in the water, stirred about and squeezed; if put in the water without the bag it is so apt to take some time to dissolve the lumps.

DISEASE CONDITIONS EXPRESSIVE OF CORRECT DIAGNOSIS.*

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PART I.

A diagnosis, to be complete, must give the pathological state, the anatomical seat and the etiological factor; the what, the where, the why; and only when this is impossible may we content ourselves with less.

Eponymous terms are objectionable. While it is sometimes a pleasure and a sign of erudition to know that a certain pathological state was first described or recognized by a certain man, still it is no medical crime not to know this; but it certainly would be a crime of ignorance if a medical man could not recognize the name of a pathological state if given in the language of pathology. Rodent ulcer is preferable to Jacob's ulcer. Epithelioma, epitheliomatous ulcer, is still more preferable.

Terms like diphtheria contain the implied pathological state (membranous inflammation) and the etiological factor (the diphtheria bacillus) and require only the addition of the anatomical seat, f. i., nose, pharynx, larynx, bladder, to make them complete. Laryngeal diphtheria is a complete diagnosis. So is syphilitic glossitis, tuberculous cerebral leptomeningitis; but neither syphilis nor tuberculosis alone is a complete diagnosis, for neither term expresses the particular pathological state or the anatomical seat that is involved.

Pathological symptoms point to a special region or organ or set of organs. The anatomical seat usually makes it clear whether the pathological condition affecting it is primary or secondary; whether the pathological condition is the metastasis of a general pathological state; whether the condition is the beginning, the middle or the end of a pathological state.

The diagnosis should never content itself with less than the exact pathological process and its anatomical seat, and only when it happens that the etiological factor cannot be ascertained that the exact pathological process is not ascertainable, may a symptomatic diagnosis be made, may the most striking or most general symptom be made to serve as the diagnostic conclusion; f. i., hæmaturia, hæmatemesis, pruritus, paralysis. Even a symptomatic diagnosis makes the anatomical seat apparent, but it ought to be made as clear as possible. A precise and complete diagnosis gives the pathological process (functional tendencies, excesses, deficiencies, perversions, or organic defects, deformities, inflammations, degenerations, growths), the anatomical seat (single or multiple, local or external) and the etiological factor (internal or external, traumatic, infectious, nutritional, developmental).

First, we have the symptoms. From the symptoms, subjective and objective, we conclude to the anatomical seat and the pathological process, and from the antecedent history we conclude to the etiological factor.

A symptom, an altered function, results from an alteration of a part or organ capable of function, and an alteration of the anatomical structure results from trauma and organic reaction, from parasitic invasion and organic resistance, from developmental and nutritional disturbances; and as a result, we have

1. Traumatic and infectious nutritional and developmental pathological processes, defects, deformities, inflammations, degenerations, growths;

*Read before the American Association of Clinical Research in Boston, September 27, 1911.

2. Functional excesses, insufficiencies, perversions;
3. Pathological tendencies according to age, sex, occupation, habits, constitutional resistance to external agencies and internal activities and influences.

Violent trauma is the only sufficient disease cause *per se*. Infection requires predisposition. Deformities and defects become diseases when they interfere with important functions and alter the sense of well-being. Absence, insufficiency, excess, perversion of physiological and hygienic elements necessary to keep the organism in normal condition will cause structural and functional diseases of nutrition, the altered nutrition manifesting itself in circulatory disturbances and tissue changes, anæmia, hyperæmia, thrombosis, atrophy, hypertrophy, hyperplasia. One etiological factor may rouse another etiological factor, one pathological condition may go into another pathological condition. Developmental diseases occurring in the course of structural development are inherited (conceptional, ancestral, parental, collateral) and acquired (in utero: maternal infection, malnutrition, trauma; ex utero: climate, occupation, function,—imperfect metabolism, circulatory defects, disturbed innervation, secretion and excretion, retention, absorption and tissue auto-intoxication, as well as trauma). Developmental diseases thus properly embrace (1) nutritional diseases *per se*, nutrition being at the basis of development, whether this be pre-embryonal or post-embryonal, and (2) the non-infectious and non-traumatic functional alterations and pathological tendencies, infection and gross trauma being incidental but not essential to development. Infectious diseases result from trauma, invasion and multiplication of parasites (vegetable, animal) and their toxins, but depend more on parasitic action than trauma; hence all diseases resulting from mechanical, electrical, thermic, chemical or other violence but not followed by parasitic multiplication and intoxication are more properly classed as traumatic diseases; and diseases of parasitic invasion and intoxication are properly classed as infectious diseases.

Therefore, no matter what part of the anatomy be affected or how it be affected, disease is of one of three classes:

1. Developmental;
2. Traumatic;
3. Infectious.

The International List of Causes of Death as adopted by the United States Census Office and approved by the American Public Health Association is defective as a guide because its nomenclature has not a common basis for classification. The diseases are classified as general diseases, diseases of the nervous system and of the organs of special sense, diseases of the circulatory system, diseases of the respiratory system, diseases of the digestive system, non-venereal diseases of the genito-urinary system and annexa, the puerperal state, diseases of the skin and cellular tissue, diseases of the bones and of the organs of locomotion, malformations, diseases of early infancy, old age, affections produced by external causes, ill defined diseases.

Nor has the Bellevue Hospital Nomenclature of Diseases and Conditions a clear, common basis of classification. Diseases and Conditions are these classified as abnormities and congenital malformations, diseases of the blood, diseases of bones and cartilages, diseases of bursæ, diseases of the circulatory system, diseases of the digestive system, diseases of the ductless glands and spleen, diseases of the ear, diseases of the eye and annexa, hernial, infective diseases, diseases of the joints, diseases of the lymphatic system, diseases of the mind, miscellaneous diseases and conditions, diseases of the muscles, fasciæ, tendons, and tendon sheaths, diseases of the nervous system, parasites: fungi and certain animal parasites, poisonings and intoxications, diseases of the reproductive organs, diseases of the respiratory organs, diseases of the skin, hair and nails, tumors, diseases of the urinary organs, obstetrical conditions, diseases and injuries, diseases of the newborn child, injuries to organs and special structures, injuries to regions, miscellaneous injuries.

Disease conditions expressive of correct diagnosis are best arranged under physiologic-anatomic headings: *sensory-motor, alimentary, respiratory, circulatory, urinary, sexual*. The symptom, functional disorder or pathological tendency, should be amplified and replaced by the pathological state underlying the symptom, disorder or tendency: *inflammation, degeneration, growth, deformity, defect*. The pathological condition should be amplified by the anatomical seat, and by the etilological factor: *developmental* (inherited, congenital, haematic, metabolic, neuropathic, secretory, excretory, trophic, plastic), *traumatic* (mechanical, electrical, thermic, chemical, etc.), *infectious* (parasitic, parasitotoxic). The primary diseases should be taken as the basis, the consecutive disease as the addition. Complications should not be made to appear as the principal disease.

To avoid repetition, the diseases are placed in their most common etiological category, developmental, traumatic, infectious. For instance, neuritis is placed among the diseases of infectious origin, but this is not to deny that there is a nerve condition simulating neuritis of alcoholism, of chemico-toxic, of traumatic origin. The etiological factor will decide whether the disease is to be classed, in a particular instance, as developmental, traumatic, or infectious.

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Alcohol and Industrial Economics.

The observations of Col. L. Mervin Maus, U. S. A., Chief Surgeon of the Eastern Department, U. S. Army, have convinced him that alcohol is the greatest of factors making for inefficiency in our army. He estimates that its interdiction would reduce the sick rate 50 per cent. Alcohol is responsible for practically all the crimes committed by soldiers, it diminishes the capacity for work, marching endurance and accuracy in rifle practice, and it impairs the ability of officers to command troops, deal with military problems, and to act on courts-martial and military boards. These facts are being taken more and more account of by industrial concerns. The railroads of Europe and America are adopting rules governing their employees in respect to the use of alcohol. These results are not concerned primarily with moral issues, but have to do chiefly with human efficiency and iudustrial economics. The fact is clearly recognized that even the moderate use of alcoholic beverages has a depreciating influence upon workmen, expressing itself not only in low-grade work and money losses but in train wrecks as well. It is probable that corporations of all sorts will consider this matter more and more in the light of the foregoing facts and insist upon the non-excessive indulgence in alcoholic beverages as a prerequisite to employment. Such personal liberty as is involved in the right to drink may be properly assailed when economic, moral and other important considerations are dangerously affected in the case of corporations employing labor which the public has a right to assume efficient, and upon whose efficiency sane economic and moral considerations depend.

Current Orientation

THE ARTIFICIAL PRODUCTION OF IMMUNITY FOR THE PREVENTION AND CURE OF DISEASE.

F. E. Stewart, Ph. G., M. D.
Philadelphia.

(Concluded from p. 777.)

Serum Therapy.

It may be accepted as a rule without exception that when bacteria invade the healthy animal body, the tissue cells are stimulated by the bacteria to form antibodies which destroy the germs and neutralize their toxins. But a sick person does not possess a healthy animal body. The power of his tissue cells in the infected area to form antibodies has partially or wholly broken down, and the same condition may pertain in relation to the entire body. This is especially true in those diseases which are characterized as a general toxemia or bacteremia. In treating such cases, therefore, it is customary to employ serums containing ready-made antibodies. This is known as serum therapy, in contradistinction to bacterin or vaccine therapy.

The immunity produced by injecting serums containing ready-made antibodies is known as "passive immuity," because the patient's tissue cells take no part in introducing antibodies.

Production of Curative Serums.—If an animal be treated for a long period with bacterial toxins or with bacterial cultures the animal acquires a high degree of immunity, and its blood serum, rich in antibodies, may be used to confer immunity upon or to cure disease in a second animal.

The blood serum of an animal so treated and possessing these properties is termed generally an antitoxin or an antiserum.

There are two classes of curative serums, the one antagonizing the bacterial toxins, such as diphtheria and tetanus antitoxins, to which the term antitoxin is alone strictly applicable, the other antagonizing the bacteria, killing or otherwise disposing of them. This latter class has been called antibacterial serums: such are antistreptococcic serum and antiplague serum.

In all serums probably both antitoxic and antibacterial substances are present, but in antitoxic serum the antitoxin is relatively in large excess. The antibacterial substances are in negligible quantities, for disease germs will grow and multiply in diphtheria antitoxin.

The process of immunization of the animal for the production of antiserum may be an extremely tedious one, extending over weeks or months. At first minute doses of the toxin or culture are administered, either subcutaneously or intravenously, and as the animal becomes accustomed to the treatment the dose is gradually and progressively increased.

From time to time the tests are made as to the protective power of the serum, and when this has reached a sufficiently high degree the animal is bled, the blood allowed to clot, and the serum bottled for use.

Conclusion.

By comparing the history of smallpox, diphtheria, tetanus, typhoid fever, hydrophobia, epidemic cerebrospinal meningitis, bubonic plague, puerperal fever, erysipelas, cholera and some of the other infectious diseases before and after the advent of immunization as a method of prophylaxis and cure, the life-saving character of this new branch of medical practice becomes at once apparent.

Diphtheria antitoxin was first generally used in 1894. Witness the consequent drop in mortality. Before its introduction the mortality from diphtheria was 44%. Under the benign influence of antidiphtheric treatment it has dropped to 12%. If administered the first day of the disease it practically saves every life. The mortality among cases treated on the second day has never extended beyond 5.4% at the Philadelphia Hospital, and similar reports come from all over the world. After the third day the mortality is higher.

An equally remarkable history may be elicited from the study of all the infectious diseases above mentioned. Can there be any doubt, therefore, regarding the value of small pox vaccine, diphtheria antitoxin, tetanus antitoxin, typho-bacterin, rabies vaccine, antimeningitis serum, plague serum, plague bacterin, or Haffkine's prophylactic, as it is also called; anti-streptococcic serum, cholera bacterin, etc., etc.? Surely not. The evidence in their favor is overwhelming.

Of course there may be failures in the use of these products; of course they are not equally valuable as prophylactic and curative agents. Much is yet to be learned concerning their therapeutic use as well as prophylactic employment. For example, antistreptococcic serum needs more investigation and standardization, as proved by Weaver and Tunnicliff, who, in their investigation of the various brands of the serum on the market, demonstrated the great difference in the immunizing value between them.

The same is equally true in regard to antipneumococcic serum. The question of dosage is also very important in this connection. Many failures have resulted from insufficiency of dosage. Both must be given in much larger doses than usually employed to obtain satisfactory results. No less than 100 c.c. in 24 hours should be administered, even when the best brands are employed.

The treatment of boils and carbuncles with staphylobacterin is yielding brilliant results; chronic gonorrheal infection is being successfully treated with Neisser bacterin and Neisser bacterin mixed; in acute gonorrheal conditions the results are not as satisfactory, but the time for a verdict is not yet. The results following the use of typho-bacterin in the prevention of typhoid fever is one of the most important discoveries of the age. It is employed as a therapeutic agent and is yielding excellent results in both hospital and private practice. Orders have been issued by the chief medical officers of some of our larger hospitals making routine treatment of typhoid fever by typho-bacterin obligatory.

For a time the history of bacteria therapy in pneumonia was discouraging. During the past year evidence in favor of the treatment has been accumulating and the future looks quite promising.

Very good results are reported by Graham and others in the treatment of whooping cough with bacterial vaccines. Further investigation of this product is important.

Tuberculin has held its own as a diagnostic agent, and in the hands of experts is considered valuable as a therapeutic measure when indicated. It is to be regretted that more care is not being taken by the general practitioner in the use of this powerful agent.

The treatment of pyorrhea alveolaris by vaccines—autogenous or stock—is giving results that promise much.

For a time the history of bacterins as prophylactic and curative agents in scarlatina was quite promising, but just now experts are in doubt regarding the results obtained in Russia, where much of the work was done.

It is to be hoped that the merit of this product will be most thoroughly investigated.

These facts concerning bacterin and serum therapy, and vaccination, justify the verdict that the new science is one of the most important branches of medicine. This science is yet in its infancy. Each discovery opens up a new and suggestive field of research. Immunology is already proving the key for unlocking many problems in physiology, pathology, diagnosis and treatment. The physician of the future will be an immunizer. To be a successful immunizer he must devote just as much care and time to the subject as the successful surgeon devotes to surgery. Surgery has secured the place once occupied by medicine. Immunology is opening the door to a more rational service and giving the medical profession an opportunity to restore medicine to its original position of influence and prestige.

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To Abort a Boil.

To abort the boil, a drop of iodo-acetone should be used. A gauze compress is then applied well saturated with glycerole of starch, to which has been added boric acid or oxycyanide of mercury. This is covered with absorbent wool, and no impermeable tissue should be used; the dressing is kept in place with a bandage, and is renewed once or twice daily. To dry up the boil, it should be well powdered with talc to which has been added a little paraffin. In this way the boil is cured in less than a fortnight, and successive inoculations are avoided.

An Antiseptic Foot Powder.

The following formula is very satisfactory:

Oil Cloves	1 part
Oil Lavender	3 parts
Tannoform	80 parts
Boric Acid	316 parts

Potassium Chlorate Tooth Powder.

The following is the formula of the royal Dental Hospital of London:

Powdered Soap	4 drachms
Sodium Bicarbonate	2 drachms
Potassium Chlorate	2 drachms
Powdered Orris	4 drachms
Saccharin	8 grains
Oil of Peppermint	8 minims
Oil of Gaultheria	16 minims
Precipitated Chalk, enough to make	8 ounces

Public Health

Rules for Mental Hygiene.

The Massachusetts Society for Mental Hygiene prints the following excellent suggestions for the protection of mental health:

Only the mentally and physically fit should beget and bear chidren.

The marriage of closely related persons should be avoided.

Children of grossly intemperate parents are liable to be imbecile or epileptic, and may inherit a nervous system unable to cope successfully with the conditions of our complex civilization.

Children of feeble-minded, imbecile or epileptic parents are liable to be feeble-minded, imbecile or epileptic —almost certainly, if both parents are defective.

Children of parents, one of whom is or has been insane, are liable to inherit a constitution that tends to insanity; and may, though apparently normal, transmit to their children this predisposition; the liability is greater if both parents are or have been thus affected.

Train your child to thorough cleanliness both of mind and body. Bad companions as well as common towels, common drinking cups, and the like should be avoided because there is danger of contagion both physical and mental.

Give your child a variety of well cooked wholesome food in ample quantity at regular intervals.

Train your child to healthful habits of sleep in fresh air, giving opportunity for at least nine hours, and for more than that before the age of 12.

Avoid conditions that tend to produce overstrain or precocity. The special business of a young child is to grow and play with other children.

Give your child opportunity for a variety of wholesome activities and interests.

Train your child to work hard in some regular occupation suited to his ability and talents, but to avoid extreme fatigue by alternation of work and rest.

Train your child to give attention to the present situation and not to worry about the past or the future.

Train your child to strict obedience in a few important matters and let him alone in regard to other things.

Train your child to avoid drugs and stimulants of all kinds.

Protect your child from shocks. Do not frighten him yourself or let other people do so.

If your child becomes worried and sleepless or has muscular twitchings or the like, consult a competent physician at once.

The best method of training is example; and what is good for your child is usually good for you.

Take advice of a competent person concerning the peculiar, sensitive or nervous child, in order to correct a possibly bad inheritance by proper education and environment.

The intemperate use of alcohol is a contributing or causative factor of several forms of insanity in the individual predisposed thereto.

The habitual use of the habit-forming drugs, especially those of the sedative and hypnotic type, may cause delirium or insanity.

Remembering that syphilis, typhoid fever, scarlet fever, measles, tuberculosis, influenza, heart, kidney and other diseases are not infrequently contributing factors in insanity or mental and nervous breakdowns, it behooves you to see that the health regulations of your community are kept abreast of modern standards of

efficiency and to seek early a physician's advice when illness invades your home.

A contagious and infectious germ disease known as syphilis is the direct cause of three kinds of brain disease, which represents at least one-tenth of the admissions to insane hospitals.

Most of them are characterized by a progressive failure of mind and body, which ends in death in a few years.

Syphilis has other ill effects on the individual and may be transmitted to the next generation. Most cases of insanity caused by syphilis are incurable by any means now known to medical science.

Do not allow diffidence or similar feelings to prevent you from promptly seeking competent medical advice concerning sexual, ethical, emotional, or mental problems which perplex you.

Remember that the mental equilibrium of many persons is endangered by the high pressure of our twentieth century civilization—be thoughtful of them.

Try to get a little recreation every day, and a vacation oftener than once a year.

Try to keep your weight up to that regarded as "standard" for your height.

Cultivate a cheerful, generous and charitable disposition.

There are many forms of insanity; a large percentage is preventable, and a considerable proportion curable.

Observe the few well-established and simple rules of health concerning food, sleep, exercise, bathing and recreation. Avoid alcohol, drugs, immoral living, venereal diseases, great mental or physical stress and excesses of all kinds.

Wood Alcohol and Blindness.

Thirteen persons in New York were blinded for life and four were killed during the past year either by drinking wood alcohol or inhaling its poisonous fumes, while throughout the country hundreds of persons have been innocently victimized by the same poison, according to the fourth annual report of the New York Committee on Prevention of Blindness.

The report further states that although wood alcohol in as small a quantity as a teaspoonful has caused permanent blindness, and in larger quantities often causes death, this poison is easily obtainable from various retail stores, drug stores and grocery stores, often without a label or warning to indicate its poisonous nature.

Rectified wood alcohol may be easily mistaken for grain alcohol, and because of its resemblance, is frequently used by ignorant or unscrupulous persons to adulterate cheap liquors. In the trades it is sometimes used in the preparation of bay rum, paregoric, flavoring extracts, Jamaica ginger and in some patent medicines.

The Committee reports the case of one woman who became hopelessly blind as a result of drinking wood alcohol contained in paregoric which she had bought at a reputable drug store. Another case is that of a young clerk who drank white whiskey from a friend's recently filled flask, and was totally and irreparably blind the next morning because the whiskey was adulterated with rectified wood alcohol.

The inhalation of the fumes of wood alcohol causes blindness. This usually occurs in those varnish industries where wood alcohol is used as a solvent for shellac —for example in varnishing the inside of beer vats, varnishing lead pencils and furniture.

Since industrial, or denatured, alcohol (untaxed grain alcohol made undrinkable by the addition of wood alcohol and benzine) can be used in practically all manufacturing processes where wood alcohol is now employed, and is safer and no more expensive, there is no longer any legitimate reason for the present wide use of wood alcohol. However, the use of wood alcohol would be robbed of its terrors if it were used in the presence of adequate ventilaton.

Two men were recently killed and one blinded in New York City while varnishing beer vats, because a ventilator was not attached to the vats, while another man was blinded and one killed because the necessary thirty minutes in the open air was reduced to twenty minutes.

The general ignorance which prevails in regard to the poisonous nature of wood alcohol is evidenced by the lack of legal restrictions of its use. In no state in this country is there a law requiring adequate ventilation in industries where wood alcohol is used, while in very few states is wood alcohol classified as a poison and so labeled.

The unnecessary deaths caused by wood alcohol poisoning and the pathetic cases of needless blindness from the same cause can only be prevented by such legislation, and by the education of the lay public concerning the death and disease following the misuse of any form of wood alcohol.

Wood-Alcohol Blindness.

H. Woods, Baltimore (*J. A. M. A.*, June 7), reports two cases of blindness from wood alcohol in addition to those formerly reported by him. His object in reporting them is to arouse, if possible, a sufficient medical public opinion to bring about legislation that will protect unsuspecting individuals from misfortune from this source. In one of the cases the blindness is attributed to the external use of wood alcohol; in another from drinking supposed and mislabeled whiskey containing it. The cheapness of the substance is a temptation to manufacturers and dealers and the discovery that it could be deprived of its nauseating qualities has been a misfortune. He remarks on the singular fact of the different susceptibility of individuals, some persons seeming to be able to take considerable quantities with immunity. The preventive methods Woods recommends, in case its manufacture cannot be prohibited, are first, making it mandatory to leave it undeprived of its nauseous qualities or else making it otherwise unfit for drinking. The State Board of Health should control its use and individuals, firms or corporations utilizing it should be obliged to report the fact to the Health Board. Its use in vaults, vats or unventilated places is a terrible menace to society and life and should be regulated. Those using it should take special pains to instruct their employees as to its dangers and wherever it is sold it should be with the usual precautions attending the sale of dangerous poisons.

The Anti-Cocain Law.

We give herewith a summary of the Walker Anti-Cocain Law, showing the provisions affecting physicians. This law, passed by the legislature of the State of New York, was signed by Gov. Sulzer on May 10, 1913, and is now in force. It regulates the possession and use of "alkaloid cocain or its salts, alpha or beta eucaine or their salts, and any admixture, compound, solution or product of which cocain or eucaine or their salts may be an ingredient." This makes it a felony for a physician to furnish, give away, etc., these substances except under the conditions named below.

Within 30 days after May 10, every duly registered practicing physician "shall make a record of the amount

of each said substances possessed by him in a book to be kept in which purchases are recorded. There shall be specifically stated in such book the amount of each said substances possessed by him and the particular place in which the same is kept. Such book shall be open to inspection by any prosecuting officer in the State and by such persons as he may designate.

If the amount on hand exceeds one and one-eighth ounces of cocain or eucaine or their salts, a report must be made in writing to the State Department of Health, stating the amount of each substance possessed and the place where the same is kept. Such reports shall be alphabetically filed and open to public inspection. No more may be purchased until the amount on hand shall be reduced by lawful disposition thereof to less than one and one-eighth ounces.

Failure to comply with the above is a felony.

A duly registered practicing physician may possess, all told, one and one-eighth ounces, part of which he may carry with him for use in his profession. (Possession of greater amount a felony.)

He may purchase in original, sealed packages, by his written order on a manufacturer or wholesale dealer in drugs.

Upon the delivery to him of such substances the physician must record the purchase in a book kept for the purpose, stating date of purchase, quantity, name and form in which purchased, name and address of seller, name of purchaser, name of person making entry, a description of the package or container in which the substance is purchased and a statement that such substance was sold and purchased in the original package, that the package was sealed and that the seals were undamaged and unbroken, that the prescribed labels were attached and were not defaced or damaged, and a statement showing how delivery was made, whether personally or by mail, express, freight or messenger.

The above record shall also show the particular place in which the substance so purchased is to be kept. This place shall not be changed without an entry being made opposite the original entry, signed by the purchaser. (Keeping in place not scheduled, a misdemeanor.) The record and statement in this book shall be signed by the purchaser.

A physician may, after personal examination of a patient, prescribe and himself dispense such substances to such patient, provided he shall execute and deliver to the patient a certificate stating the amount dispensed, the date, and name and address of the physician. (Failure to give certificate, a felony.)

A physician may also write prescriptions which may be filled by a licensed pharmacist, who is required to deliver to the patient a certificate.

At least once in each six months the physician must record in a book kept for the purpose the gross amount disposed of by him. If he has on hand less than the difference between the amounts purchased and the amount disposed of, as shown by his records, it is presumed that the law has been violated. (A felony.)

Failure to keep required records, a misdemeanor.

Since wholesalers are not permitted to sell to physicians in New York State who are not duly registered and licensed to practice, all orders for cocain preparations should have written upon them the license number of the physician ordering.

Development of the House Fly.

The eggs are deposited by the female, about one hundred and fifty in a batch, in manure or decaying organic matter. In a few hours, under favorable conditions, the eggs hatch and a small white grub emerges from each. Finding themselves in the midst of plenty, the larvae begin feeding and eat until the limit of the first skins is reached. Growth in this stage is extremely rapid, and in a few hours the skin is split and discarded, while the second skin, a size larger, supplants the function of the first. Feeding is then resumed and this process is repeated some four or five times. This is not only true of the house-fly but of the majority of the million kinds of insects. Four or five molts is the common number before the grub or caterpillar is full-grown and the next stage begun. In the case of the fly—unlike butterflies and moths—the last larval skin is not cast, but dries and forms the pupal case. I wish to emphasize the fact that the larval stage in insects is the season of growth, and is, moreover, the only period of growth and that after this stage is passed the insect never grows any more in bulk. Thus the next stage after the larva is known as the *pupa* or the chrysalis, and this is devoted entirely to development. In the house-fly development is very rapid, and is preceded by a process of dissolution, for if a pupa-case be broken open a short time after pupation, it will be found that there are no signs whatever of organs such as legs, wings, or even mouth-parts. A yellowish milk fluid will be found, and from this the complete adult fly is developed, under optimum conditions, in less than a week. Thus from the time the egg is laid until the emergence of the adult fly less than fifteen days may elapse.—(C. K. Brain, *Monthly Bulletin*, Ohio State Board of Health.)

The Training of Health Officers.

F. F. Wesbrook, of Minneapolis (*J. A. M. A.*, April 19), says that we have been slow in this country to recognize the need of special training in public service and especially the neglect of this consideration in the appointment of health officers. We seek through volunteer agencies to secure satisfactory administration of laws which should become operative through official mechanism and better qualified officials. We often leave to the incoming graduate the unpopular work of the health officer. There is too much of selfish interest and too little altruism in considerations for the public welfare. We need experts, and they should have the sympathetic support of the medical profession.

A general training in medicine does not qualify graduates as experts in public health matters. Engineering colleges are providing courses in sanitary and municipal engineering, but further training is needed for their graduates from a medical point of view. The same is true as regards the training of social workers and others who have important public duties to perform. Wesbrook gives an outline of co-operative work laid out at the University of Minnesota which was presented to the Minnesota State Sanitary Conference, and also a list of subjects that should be included in the curriculum for the student of public health. An additional safeguard for public health, he says, if it seems desirable, may be the requirement of a license of the trained worker in this department in addition to his diploma or certificate. The Danish plan of a provisional appointment to public office for a limited period in order to determine practical fitness has very decided advantages.

The requirements of an efficient public health officer are enumerated by G. F. Reinhardt, of Berkeley, Cal., in the same journal of the issue of February 8. He points out that the special qualifications are not possessed by the ordinary practitioner. The day is passed, he says, when a printed notice tacked on the gatepost

will suffice for protection of the public against infectious disease and any thinking layman can recognize the futility of perfunctory and routine methods. A knowledge of laboratory diagnosis is also essential and each infection must be met in its own way, and the health officer should be able to meet unexpected situations as they occur. A distinction that has come to stay is now made between preventative and curative medicine, and this fact is met and provided for in some of our best medical institutions. Reinhardt believes in a degree for doctors of public health and he tells what is being done at the University of California for students who intend to make public hygiene a specialty. Besides the special instruction given to all, the institution offers advanced courses in this department, and the increasing number taking these each year shows the interest that has been aroused. Research studies are also encouraged, and some important work in this line is being made and has already been done.

Saving the Backward School Child.

G. M. Gould, Atlantic City, N. J. (*J. A. M. A.*, April 5), calls attention to eye defects in backward school children and especially notices some recent work of Dr. W. M. Richards, of New York City, done under control of the school authorities. Thirty-eight children were examined and treated for refraction errors, and the testimony of the principals and teachers is epitomized as regards the results on the school progress and moral character of the children. They seemed to be almost invariably very good, and where there was continuance of symptoms or no improvement, long standing of the disease producing a great deal of amblyopia or the bad home environment seem to account for the condition. Dr. Richards estimates that there are about 78,000 children with defective vision in the New York schools, and that this could be remedied in 80 per cent. if the principles and practice of refraction were properly taught and learned by the general practitioner in the medical school. He believes that in New York there is a divided responsibility in the government of the schools; that a cycloplegic is not used in determining the refraction errors in the 84 per cent. of the hyperopic defectives, and that the small errors are ignored, though they have great influence in determining effort, proficiency and conduct in the school children. Even if this were done, it would probably be impossible to get the requisite spectacles made and paid for. Lastly, diagnosis and treatment of defects and diseases of other organs than the eyes is not at present feasible. The case would seem rather hopeless at the present time.

Human Waste.

The prodigality of nature has begotten prodigality in man. The captains of industry, however, are expertly checking the frightful waste in production, eliminating the wastes of exchange and in other ways applying economic standards of efficiency. Still continues waste of the chief resources of the nation—human life and strength. The unnecessary, preventable loss of national vitality now amounts to one and a half billions of dollars a year. But the signs of a salutary awakening are apparent on every side. The campaign of the life insurance companies, of the American Steel and Iron Institute, of our boards of health, legislatures, railway presidents and factory heads, looking to the diminishing of the chance of illness and the number of unnecessary deaths of workmen, is a harbinger of the time when we shall equal Prussia's demonstration whereby the expectation of life in that country has been advanced a decade.

Treatment

The Medical Treatment of Appendicitis.

Beverley Robinson, of New York, makes an earnest plea for great conservatism, as opposed to the prevailing and erroneous judgment of frequent operations almost as soon as the diagnosis is made. In the vast majority of cases a "cure" will be established in several days by the following rules of medical treatment, which are eminently judicious and safe: Rest on back in bed. Liquid food; enemas of warm water and sweet oil to move the bowels (mix oil with yolks of eggs, add water and stir). Use plenty of oil—6 to 8 tablespoonfuls not too much. Give enemas with fountain syringe (preferably) or Davidson's syringe, with the patient on the left side, near the edge of the bed, the knees drawn up; retain the enema a little while unless there is much griping or increased pain. In that case let the enema come away and repeat later. Give from a pint to a quart, or more, of liquid with each enema, to wash out the lower bowel thoroughly. It is desirable to attach to the metal or hard rubber tube of the syringe a short soft rubber tube about six inches long and a half inch caliber for enemata. Before introducing the tube into the bowel see that the air is expelled and that liquid is coming out of tube. Apply locally over the belly, warm flannels wet and wrung out with alcohol and water(one part alcohol, three parts warm water). Cover the wet flannel with rubber tissue. When the flannel is dry wet it again with alcohol and water. Give codeine tablets, grain 1/10, every two hours until the pain is notably less; then less frequently. There must be no transport from the bed or sitting up, so long as pain in the belly continues and even if there be little or no fever. Give cracked ice and the best brandy for nausea or weakness, a teaspoonful frequently. Give the best and most nutritious liquid foods, i. e., strong broths or milk alternately or mixed together. Of these, one or more ounces every two hours should be given, when prostration is present. These would preserve life for many days.—(*Medical Record*, March 22, 1913.)

Artificial Pneumothorax.

S. Adolphus Knopf gives the following indications for the production of artificial pneumothorax: It is indicated in all such cases as have not improved under ordinary hygienic, dietetic, climatic, and symptomatic treatment. Such cases are as a rule moderately or far advanced. 2. It is indicated in those earlier cases in which there is no improvement because of mixed infection, or lack of recuperating powers, or when for other often inexplicable causes the condition remains stationary or the progress is particularly slow. 3. It is, of course, indicated in all rapidly progressing cases whether they are treated in institutions or at home, and in no matter what climate. 4. It is indicated for all patients of the moderately or far advanced type, within or without institutions, who are discontented, feel that not enough is being done for them, and who are desirous to have artificial pneumothorax tried. 5. It is indicated in uncontrollable hemorrhage or chronic sanguineous expectoration. Knopf emphatically denies that bilateral involvement is a contraindication to the operation. Tuberculosis strictly limited to one side is rare in patients who have had the disease for any length of time. So far as immediate symptomatic improvement is concerned, these cases, after operation, show gratifying results practically always. Casts and albuminuria are not necessarily a contraindication, the general condition determining this point. Some authorities consider basal

involvement a contraindication, but Lapham does not agree with this judgment. She does not consider this condition an absolute contraindication. The operation is permissible because of the relief which it gives to the patient. Decided contraindications are: 1. Extensive involvement of both lungs. 2. Much cavitation of the affected lung, with consequent danger of the needle entering a cavity 3 Dry pleurisy or pleurisy with effusion. 4. Myocarditis, other serious cardiac complications, or serious renal complications. 5. Any pulmonary tuberculosis complicated by any constitutional disease which in itself is sufficient to inhibit all possible chances of recovery. 6. When the patient, in no matter what stage of the disease, is too apprehensive and strongly objects to the performance of the operation, it should not be resorted to. Certain accidents may occur, such as air embolism, cardiac or pleuritic shock resulting in failure of respiration, spasm of the glottis, aphonia, and inability to cough. Hemorrhage or subsequent neuritis, owing to the injury of a blood vessel or nerve, may also occur. Pleurisy with effusion has resulted from the operation a number of times. Emphysema may be an annoying, although not dangerous, result. Weiss has reported a case of pneumonia in the other lung, causing death despite the withdrawal of the nitrogen. Knopf concludes that artificial pneumothorax is a valuable adjuvant in the treatment of pulmonary tuberculosis, yet in view of the possibility of an accident (not necessarily in the primary filling, for experience has shown that they most likely occur in subsequent fillings) every practitioner should protect himself by procuring the written consent of the patient, parent, or guardian before resorting to the operation.—(*New York Medical Journal,* March 22, 1913.)

Yaws.

Alston records the treatment of 500 cases of yaws with salvarsan ("606") in the St. Augustine Hospital, Trinidad. Only intra-muscular injections were given and the usual dose was 9 gr. (0.6 grm.) for an adult. Dr. Alston gives the following report of the treatment:

The first case was injected on January 4th, and the 500th case on October 14th. The injections were made by Drs. Rost, Cleaver, and myself.

"I write this on November 30th, so six weeks and six days have elapsed since the 500th case was injected.

"*Results.*—Four hundred and ninety-eight cases are cured, that is 99.6 per cent; 409 cases were cured with one injection, or 82 per cent.; 75 cases were cured after receiving a second injection; 14 cases were cured after receiving a third injection. The total number of injections was 603.

"*Stubborn Cases.*—Two of the cases are not yet cured; S. C., aged 7, male, was injected on September 16th, and re-injected on the 11th instant; T. M., aged 14, male, injected on October 2, and re-injected on the 8th instant. Both cases show amelioration, and each will be given a third injection next week; if this cures them we shall get 100 per cent. of cures.

"*Relapses.*—There were five relapses—1 per cent. Before salvarsan was used, relapses were 12 to 14 per cent. Relapses are quickly cured by a second injection.

"*Complications.*—When Dr. Cleaver was acting for me, four deaths occurred among the cases injected by him; he is of opinion that none of the deaths were the result of the injections with salvarsan. No local gangrene, no nerve or ear complications, and no dimness of sight occurred in any case. The only complication was the formation of a simple abscess at the seat of injection in two cases, that is one abscess for every 301 injections.

"*Conclusions.*—Salvarsan is a specific for yaws, and there is no danger attending its use for this disease. The tropics are under a debt of gratitude to Professor Ehrlich for his discovery of salvarsan."—(*The Practitioner,* No. 8, 1912.)

Adenitis in Typhoid Fever.

Verdelet records two cases of this rare complication. (1) A child of 2 years had suppurative adenitis of the right epitrochlear glance in convalescence. The pus contained staphylococci. The probable entrance entry was a small wound on the thumb. There was complete recovery after curetting. (2) A girl of 9 had severe typhoid with relapses. In convalescence there was adenitis of right epitrochlear glands. Resolution without suppuration ensued. The typhoid bacillus was the probable cause of the adenitis in this case.

The Anxiety Neurosis.

Louis Miller, of Toledo, Ohio, discusses at length that peculiar variety of fear which the subjects often recognize as unjustified and who are often free from neurasthenia or exhaustion and present no other intellectual defects—true anxiety neurosis. Its exact place in neurology or psychiatry has not been settled. Miller cites some interesting historical instances and gives a series of illustrative cases that he has oberved. The most discussed causative factor is the sexual, as propounded by Freud and his satellites. Freud claims that practically all of this class of affections are due to some form of sexual trauma. Miller does not appear to lean very strongly toward the Freudian hypothesis. He has been unable to satisfy himself, even by a stretch of credulity, that the sexual factor is to blame in all of the cases. There are very many instances in which sexual irregularities seem devoid of the results postulated by Freud. These practices seem to do no great harm until the subject hears of the direful consequences. The reform or suppression is probably not the cause of the fear. The neurosis develops because of the idea of harm. Many people practice coitus interruptus to prevent conception without bad results, provided they have been assured of its harmlessness or have not been apprised of possible harm. Miller believes that the anxiety neurosis is initiated by a conscious idea, which releases certain subcortical centers to activity with resulting physical and affective disturbances. At first the cycle may have been of accidental origin, toxic, gastric, et cetera, which later may be developed and maintained by certain reflex habits. Some individuals are more predisposed by either a lessened inhibitory action of the cerebrum or an irritable weakness of subsidiary centers, or both conditions may be present. All those influences (inheritance, improper training, excesses and cares) which tend to undermine the stability of the nervous organization are everywhere acknowledged to be heavily responsible in preparing the most likely soil. The last words have not been said regarding the pathogenesis of this disorder and some of the links in the chain are hypothetical, therefore opinions should be tentative. Whatever shortcomings one may find in our present knowledge of this group of diseases, it is a good deal advanced over that of a few years ago, and in consequence of a more rational attitude toward them the treatment is now more consistent and consequently is more satisfactory to both patient and doctor.—(*The Physician and Surgeon,* February, 1913.)

Rheumatic Neuritis.

F. J. Poynton observes there occur sometimes in childhood examples in which the stress of rheumatic infection falls upon the nerve-trunks. Presumably a certain degree of interstitial neuritis is the result. Severe nerve pains may arise, and irritation may produce facial spasm or blepharospasm, or neuralgic pains with sudden local œdema. In adults we are acquainted with such a condition producing intolerable pain in the head and scalp with the formation of small intensely tender nodes along the course of nerve-fibres. Occasionally these small tender nodes occur also in childhood. They are cases which may prove very intractable and prone to relapse.

Headache has long been recognized as a trouble to rheumatic children. It is one of the most frequent of the early signs of chorea; and is then usually dull and rather persistent. Migrainous attacks are another symptom. These may be very severe in anæmic rheumatic children suffering from aortic regurgitation, and may mark the commencement of a relapse. They would appear to be a part of that general nervous instability which is such a feature in some of the more delicate rheumatic children.

Phenacetin and caffein relieve the pain better than aspirin or salicin, and should the attacks increase in frequency they are valuable warning to the physician that the child should have a short but complete rest.

Habit-spasm or facial tic is more frequent in rheumatic children than in others and it may be extremely difficult to differentiate it from true chorea, and that what one has taken to be a facial tic in a rheumatic child may be followed by true chorea.—(*Brit. J'n'l Dis. Child,* Feb., 1913.)

Tubercle of Choroid in Tubercular Meningitis.

W. B. Marple emphasizes the importance of repeated opththalmoscopic examinations in cases of tubercular meningitis, otherwise tubercle of the choroid will almost certainly be missed. The author has never found in cases of this nature evidence of exudation on Descemet's membrane, so commonly seen in some other varieties of choroiditis. With few exceptions the choroidal lesions in these meningitis cases have been small, miliary tubercles, round or oval in shape, rarely of an irregular shape, of a greyish or greyish-white color, and usually without any pigment, as though the retinal pigment epithelium had been gently brushed away, leaving a "moth-eaten" edge. The tubercles are generally situated in the neighborhood of the optic disc or yellow spot, within one to three disc diameters from the latter. Papillitis is met with in a fair proportion of cases. In thirteen consecutive cases of tubercular meningitis choroidal tubercle was found in all. In the investigation of such cases Marple strongly advocates the use of the electric ophthalmoscope.—(*Ophthalmoscope,* No. X, 1912.)

Dry Treatment of Certain Moist Dermatoses.

C. J. White of Boston believes that the external use of bland, antiseptic, absorbent powder, such as borated talc, is of great value in treating moist dermatoses.

In the acute stages he puts the patient to bed, on an air cushion if there are dorsal lesions and keeps him recumbent *all* the time, even during defecation, urination and eating. This is insisted upon until the moist surfaces have ceased to appear. The powder is sifted on and every lesion on the body is dredged as often as any moisture shows itself. If the disease affects the scalp the hair should be sacrificed. The patient should lie naked in the bed and the sheet and blankets should be supported on a frame so that nothing should touch his body but the powder which should lie in sufficient depth below, around and above him to cause immediate absorption of any supervening moisture. No two surfaces should touch each other; the arms should be kept away from the body, the fingers should be abducted, the legs should be stretched apart, the penis should be separated from the scrotum and the scrotum from the thighs by much powder. The sick room should literally be covered with a layer of the powder. Such a procedure really demands a room with a bare floor and walls and one free of unnecessary furniture.

If the air is very dry the patient suffers from this abundant omnipresent dust, but the aural, nasal, oral and optic passages can be made comfortable respectively by appropriate plugs of absorbent cotton, demulcent gargles and pastilles and by eye washes.

As a rule the moist places remain clear and simply dry up, but occasionally a great crust heaps up and pus collects beneath it. This overlying mantle must be removed at once and the drying process instituted again *in situ.* If the purulent process develops a second time it is wise to apply an antiseptic, drying wash, as black wash, until the exuberant pus has been conquered. Then return to the powder treatment, for this is the method we are advocating in its entirety.

This mode of treatment inhibits bacterial growth. If all of the above details are scrupulously insisted upon and faithfully carried out, particularly in the way of the naked body and the abducted limbs, there is very little opportunity for heat or moisture to develop and pathogenic organisms cannot arise to cause or to perpetuate the disease, or, at any rate, its complications.

Even if these measures fail to cure the affection they at least procure for the patient comparative comfort, for everyone knows the patients' increasing dread of the tearing off of old dressings or getting out of bed for the bath, or turning over in bed for a new application, when his horny layer is lost over large surfaces and the raw, sticky albuminous surface has glued the bandages to the wound.—(*Jour. Cutaneous Dis.,* December, 1912.)

Certain Elementary Concepts in Education Applied to Medicine.

Adami, of Montreal, makes a plea for the application in America of the educational principles which guide the General Medical Council for the United Kingdom. That council registers all duly qualified medical men. And here is the significant fact: that council conducts no examinations. Education is something beyond mere instruction, and it is the quality of our educational methods that should give us most concern. Adami thinks the time is ripe in the United States, the way having been prepared by the Carnegie Foundation, for the appointment of a Federal Medical Council, subsidized by the government at Washington, and formed of representatives from all the states, a council which should appoint well-known leaders of the profession to act as committees or assessors to visit, report upon and make recommendations regarding the efficiency and deficiencies of the individual medical schools of this continent, the expense of such inquisitions to be met by the schools visited. The private institution which has laid the foundation should now be supplanted by a national institution, an institution authorized not by the profession alone, by the American Medical Association, for example, but by the nation at large, which shall act authoritatively in these matters. Adami urges that each state continue to control and direct its own

educational methods. We do not want, we must fight against, any dead level of sameness in procedure and output. Let the Federal assessors test the results, making sure that they reach the desired standard of quality. If this be asking too much at the present moment, at least the state might take action, might appoint committees of inquisition to inquire into and report upon the quality of the instruction afforded and the examinations of the schools within its boundaries, and might accept the graduates of those schools without the present farce of an examination which does not educe the capacity of the examinee.—(*N. Y. State Journal of Medicine,* May, 1913.)

The Treatment of Typhoid Fever.

O. H. Brown, of St. Louis, after an exhaustive survey of the literature and most successful practice, offers the following summary:

1. The ideal prophylactic treatment of typhoid is the proper disposal of human excreta. Inoculation of dead typhoid bacilli are of very great importance in preventing typhoid and should be used wherever there is suspicion of danger.
2. Inoculations of dead typhoid bacilli are of pronounced benefit in dealing with typhoid carriers and preventing relapses during the course of an attack of the illness.
3. A specific serum of practical value is yet to be found. The results thus far obtained are encouraging.
4. Frazier has recently reported that he aborted six cases of typhoid fever with large doses of ipecac administered in salol-coated capsules.
5. The diet in typhoid fever should consist of a small amount of protein, a small amount of fat, and a large amount of carbohydrate. The preferable protein food is milk and albumin water. The preferable fat is cream, and the preferable carbohydrate is lactose. A pound of the latter may be administered in twenty-four hours.
6. The above diet should reduce the grade of toxemia and should maintain the patient's weight, and should therefore increase his immunizing power.
7. The typhoid patient should be regularly given copious supplies of water. Cracked ice may be taken continuously during waking hours.
8. Pyrexia may often be controlled by keeping the patient in a cold room where the air is kept freely moving, and by keeping the patient very lightly covered. Arms and legs may require heavy covering.—(*Interstate Medical Journal,* May, 1913.)

Juvenile Psychasthenia.

Tom A. Williams describes the method of cure of four cases. It consists in the main of ascertaining the psychic train of happenings which may be postulated as most important etiological agent of psychasthenia. In no case was there revealed, however, the physical sexual basis which Freud has so emphasized. Readjustment is simple when the fault has been revealed. In children great complexity is not to be looked for; hence little time is required as compared with the psychoanalysis of some adults. Thus two children, 8 and 11, respectively, were seen only once each, a boy of 13 four times, and another small boy, a stammerer, six times. In only the first interview in each case were over thirty minutes required except in the elder boy. The cases are preceded by a short description of psychasthenia as demarkated by Janet, and they are followed by distinction between Janet's syndrome and other neurotic states.—(*Amer. Jour. Med. Sciences,* Dec., 1912.)

Syphilology

Syphilis.

If syphilis were regarded simply as an infectious disease a campaign would have been waged against it long since. It is too often regarded merely as the wages of sin and the danger from it to the community is overlooked. Syphilis should not be thought of as due to crime. The glaring facts should be appreciated that many contract it innocently and that our asylums are the result of syphilitic infection. These constitute, year after year, a heavy charge upon the state. Here is enormous waste, economically, which the public should appreciate. From the humanitarian standpoint the suffering due to syphilis is appalling. The problem as to what should be done cries aloud for solution and obstacles appear which do not hinder similar work against other diseases. There are few diseases so well understood to-day as syphilis and fewer for which we have such reliable means of diagnosis, such powerful remedies and so good a method of testing for complete cure. The cause of the disease and also the modes of transmission are well known, yet it remains a serious menace even to the most virtuous individuals of all classes. We are nearly as far as ever from controlling it. The persistence of this evil is largely due to ignorance of its extent and ravages. It cannot be too strongly urged that syphilis is an infectious disease demanding systematic work for its prevention. It cannot be made a reportable disease in fact until people assume a more charitable attitude towards its unfortunate victims. Now the majority of syphilitics are not properly treated because few hospitals are equipped too carry out the newer methods, some hospitals are not allowed to treat syphilis as such in their wards, and but few physicians have had opportunity to become skilled in the modern treatment. Consequently individuals are incapacitated who might otherwise be earning a living, children inherit a disease from which they should have been protected, and communities suffer large financial losses directly and indirectly owing to the neglect of syphilis. The people should know all the facts and steps should be taken by communities in their own interest to prevent the spread of the disease.—(*Boston Medical and Surgical Journal,* December 26, 1912.)

The Passing of Parasyphilis.

S. Pollitzer, of New York, absolutely condemns the old teaching that treatment should await the development of secondary symptoms, for it would now mean that we should wittingly wait till the system is flooded with spirochetes, which in the light of our modern knowledge of the pathology of syphilis and of our advanced methods of treatment would be akin to malpractice. The diagnosis must be made by means of the demonstration of spirochetes in the initial lesion and the treatment by excision or destruction of the chancre and repeated doses of salvarsan followed by an energetic course of mercury instituted at once. Only thus can we hope to prevent the severe lesions of the later period of syphilis, the most terrible of which are those spirilloses of the central nervous system which we have heretofore known as parasyphilitic. Among many new things, it has been brought home to us that the spirochetes within a few weeks of their inoculation invade every tissue of the body and, not least, the central nervous system. If they are not destroyed there by the natural agencies of defense or by treatment, irreparable injury results. The lesson is obvious; every

case of syphilis should receive the most energetic treatment as soon after infection as the diagnosis is made.—(*Medical Record*, May 3, 1913.)

Studies on a New Method of Injecting Neosalvarsan in Concentrated Solution.

Drs. Paul Ravant and Scheikevitch of Paris give the technique of a new method which is very simple. A 10 to 15 c. c. glass cylinder is filled with the necessary amount of freshly distilled water, and in this the Neosalvarsan almost instantaneously dissolves. The solution is injected into a vein of the arm by means of an all-glass syringe. The whole procedure requires not over a minute and a half. The 10 c. c. of water are used for 0.75 gram Neosalvarsan or even for 0.9 gram, these concentrations being well borne. Ravant gave 228 injections without any immediate reactions and no sensation of pain. The patients either went to bed after the injections or left for their homes. No action whatever on the vein could be observed, although some patients were given as many as six injections in the same region. Owing to the elimination of Wechselmann's Wasserfilter (dead bacteria in the water) and the absence of impurities of water or sodium showed a very uniform regularity of the after effects could be observed. Especially after the first injection rise of temperature, nausea, vomiting and diarrhoea were noticeable, which were less after repeated doses. In conclusion the authors say their method takes away the uncertainty (danger) of the composition of distilled water. Oxydation is hardly possible. The very simple apparatus can be easily sterilized.—*Annales de Dermatologie et de Syphiligraphie*, Nov. 4, 1913.

Rectal Use of Salvarsan in Children.

Weill, Morel and Mouriquand on account of the difficulties of giving salvarsan to children intravenously gave it per rectum and found a total absence of any rectal or general reaction even after injection of 40 cgm. The patients were from 10 to 13 years old. A dose of 10 cgm. was first given, a second of 20 cgm. and a third of 40 cgm. Ehrlich's technic was followed as for intra-venous injections, five to ten drops of laudanum being added to the solution to ensure rectal tolerance. They found it must be retained four hours at least. It was shown that salvarsan was easily absorbed by the mucous membrane of the child; that this absorption caused amelioration of a marked character in certain cases of hereditary syphilis and severe chorea. Excepting in urgent cases the rectal route is to be preferred in children, as it has sufficient activity without producing a reaction.—(*Lyon méd.*, No. CXIX, 1912.)

Role of the Wassermann in Hereditary Syphilis.

Andronesco and Saratzeano tested twenty-two children and thirteen mothers by Wassermann's original method. In eighteen of the children and twelve of the mothers there was a positive reaction. The father's blood was examined in two cases and found positive in one. The one negative maternal case was not one of syphilis either in the parent or child. Several of the children who reacted positively were suffering from diseases of doubtful etiology, e. g., Little's disease, alternating hemiplegia, and haemophilia. The authors' conclusions are as follows: (1) Colles's law is quite correct; (2) mothers of syphilitic children give as positive a Wassermann as cases of florid syphilis; (3) the number of births has no influence upon the reaction; (4) the Wassermann reaction is more intense in congenital syphilitic children than in their mothers who are free from visible lesions.—(*Presse méd.*, No. XX, 1912.)

Congenital Syphilis Treated by Neo-salvarsan.

Bunch reports (*Brit. Jour. Child. Dis.*, Jan., 1913) a girl, aged 2 years, who on admission to hospital was suffering from an offensive muco-purulent discharge from the nostrils, malnutrition, and well-marked condylomata round the anus. The Wassermann reaction had been markedly positive, and on October the 30th she was given a dose of 0.45 grm. neosalvarsan intravenously into the median basilic vein. No ill-effects of any kind followed the injection. The child left the hospital two days afterwards with the syphilitic symptoms greatly improved, and a week afterwards the condylomata and muco-purulent rhinitis had disappeared.

On November the 13th a second injection of 0.45 grm. neosalvarsan was given, this time intra-muscularly into the right buttock. The child had steadily improved in general health and had put on weight. The Wassermann reaction was negative.

Salvarsan and Measles.

Marfan and Lagana note the case of a 7-year-old boy who had had syphilitic epiphysitis when six weeks old. He suffered from gummata of the palate. He was given an intravenous injection of Salvarsan and 9 days later a second injection. Four days afterward he had fever and catarrh, followed by a typical measles rash. The injections had no influence on the development of measles. A similar case is recorded by Williams in *Boston Med. and Surg. Journ.*, No. I, 1912, in a man, aged 22 years, who was given an intravenous injection of 0.6 grm. The next day he had a typical coryza, followed a day later by a rash entirely typical of measles.

Dermatological Hints.

In all cases presenting an intense itching unless of a parasitic origin, it is very important to examine the urine carefully, as one frequently finds diabetes or nephritis.

Tar should not be employed over wide areas of the skin, as very acute poisoning may result. The scrotum, axilla and face are most sensitive to the action of tar.

It should never be forgotten that the proper preparation of a salve in skin diseases is of as much importance as the choice of its ingredients.

One should always remember that the action of a drug varies in intensity in salve, paste or lotion form.

Make it a routine practice to examine the mouth of every skin patient, for it often happens that interesting mouth lesions exist unsuspected by the patient.

In a stubborn leg ulcer it is well to try the effect of zinc ionization before condemning it as "chronic."

To make Lassar's paste less sticky, it may be mixed with an equal part of lanoline.

Sea-bathing, though often contraindicated in cases of eczema, may generally be safely indulged in by the psoriatic.—(*Urol and Cut. Rev.*)

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Clinical Lectures on Urology.

Dr. Henry H. Morton of Brooklyn, Professor of Genito-Urinary Diseases in Long Island College Hospital, author of Morton's Genito-Urinary Surgery and Syphilis, and one of the best known urologists in the country, has consented to present to the readers of THE MEDICAL TIMES some of his clinical lectures.

Dr. Morton gives a public operative clinic for physicians at Long Island College Hospital every Thursday afternoon and this journal will publish a stenographic report of some of the most interesting cases. The clinical lectures of Dr. Morton are classics, presenting every detail of the subject in a clear, concise and very lucid manner and we know our readers will consider themselves fortunate to have the privilege of going over the cases each month.

The Passing of Perchloride.

Owing to the prominence given in the lay press to a number of poisonings with bichloride of mercury the public has recently obtained much needed enlightenment as to the dangers attending the use of this preparation. Beyond an expression of opinion that for the protection of the public the sale of bichloride should be, if not prohibited, at least circumscribed by the most stringent regulations, it is not proposed to deal here with this side of the question, but briefly to consider its use as a disinfectant from the viewpoint of the physician and the surgeon.

Very erroneous views of the bacterial efficiency of many disinfectants are still abroad, but as regards none have looser statements been made than as regards mercuric chloride; it has been asserted, for instance, that solutions as high as 1 in 50,000 and even 1 in 100,000 are reliable germicides.

In common with other salts of the heavy metals $HgCl_2$ is an active coagulent of albuminous matter, and this fact cannot fail to militate against its germicidal efficiency under actual, as distinct from laboratory conditions of working. Against naked organisms, the bactericidal efficiency of bichloride is very high (its Rideal-Walker coefficient is 20) but in admixture with soap, pus, blood, serum and albuminoids generally, combinations are formed in which it has practically no germicidal effect. In the words of a writer in *American Medicine* for May, 1912, "its incompatability with soap and serum is so marked as to prohibit its use under many common conditions of working."

The futility of using bichloride in surgery and obstetrics and for the disinfection of human excreta, etc., where the organisms against which it is directed are only found in combination with one or other of the various forms of organic matter referred to, must be obvious.

For years, tons of $HgCl_2$ were used in India for the disinfection of B. pestis, until it was proved to the satisfaction of the Government that modern disinfectants of the aromatic series possessed bactericidal efficiency fully equal to that of bichloride, without either of the two grave disabilities attaching to the latter. Since that time the use of bichloride has been entirely abandoned in India, and it would certainly make for the progress of medicine and surgery throughout the world if the example of the Government of India in this respect were generally followed.

"End Seat Hogs" and Others.

The present Mayor of New York is possessed of some obsessions, including the "ragbag" newspapers, certain clergymen, aldermen and other "nasty rascals." Persons who criticize New York's police force and its police commissioner are characterized by names quite in keeping with present day burgomasterial dignity. Just now the "end seat hog" is occupying the mind and attention of the Mayor, who inveighs at some length against this dangerous criminal.

We can heartily agree with the contention that the "end seat hog" should be deported, decapitated, drawn and quartered or perchance boiled in oil. He is a desperate character at best and unless he be shown his proper place—the other end of the seat—the citzens of New York may well fear for their future. This ill-visaged ruffian is a menace to the people for he ruffles their tempers, spoils their polishes and occasionally causes them to bark their shins. We can think of no punishment sufficiently severe for such outlaws and we heartily subscribe to the Mayor's feverish activities in ridding the community of this despicable class.

With matters of such profound importance at hand it is not to be wondered at that the matter of the sending to the penitentiary of four police inspectors, the sentencing to the electric chair of a prominent police lieutenant and the incarceration in Sing Sing of other policemen should fail to elicit undue consideration. The existence of Kneeland's book[1], which exposes in all the horrible habilaments of naked truth the disgusting details of the barter and sale of women's souls in New York will not be officially recognized. What boots it if "the 15,000 professional prostitutes of Manhattan entertain ten guests apiece, or at least 150,000 persons every day,"[2] so long as we keep the "end seat hog" in his proper place.

The comparative scarcity of open cars in New York makes it easy to arrest every hog who believes his call-

(1) Commercialized Prostitution in New York City, by George J. Kneeland.

(2) Ibid. P. 111.

ing and election sure if he persists in allying himself to an end seat, but it would be a human impossibility for New York's 10,000 policemen to put a stop to street soliciting and the bold plying of the trade of public prostitution.

How can a guardian of the peace pursue the "hog" and the prostitute simultaneously?

And, we make bold to ask, why do we worry over this public woman, this member of the "oldest profession," who has always been with us and whose kind will doubtless follow the calling as long as human nature is constituted as at present?

Why? we ask.

An examination of 466 prostitutes, all under the age of 30, inmates of Bedford Reformatory for Women[3] showed that only 10.7 *per cent. were free from venereal infection* and that practically 90 *per cent. had syphilis or gonorrhea* and 36.4 *per cent. had both* of these diseases.

It is not unreasonable to suppose that this percentage would hold good, or nearly so, among the prostitutes outside the institutions.

If this be true, therefore, 135,000 men in the city of New York are daily exposed to the horrors of those loathsome and dangerous affections, which are the causes of "paralysis, sterility, miscarriage, deformity, degeneracy and insanity."

The situation is rendered doubly appalling by the knowledge that these diseases are to a large extent preventable and that they are being minimized in San Francisco and other places where the authorities are alive to the necessities.

But why should we worry over a little matter like 15,000 prostitutes spreading venereal diseases every day? Why should we be disturbed over the birth of blind babies, over the increase of the feebleminded, the degenerates and the criminals? What if our tax bills are being raised owing to the increased burden in caring for the insane, criminal and weak-minded classes? Are we not in greater danger? Is not the "end seat hog" at large creating dire havoc?

Until that scourge is wiped out, the "ragbag newspapers" squelched and the fifty-one varieties of "nasty rascals" placed in limbo, we must be content to see our young manhood debauched by the evils attendant upon our most dreaded plague, prostitution.

City Sanitation and the Police Power.

The degree to which the police power may be invoked in the interest of public health is measured by the enlightenment of a community. Public opinion determines the extent of its application. Persons commercially interested in the sale of milk who happen to be more or less ignorant of sanitary decencies, who have the effrontery to declare that the city authorities exceed constitutional limits in compelling them to clean their milk cans, and who rely upon the unenlightened elements in the community to back them up in their negligence, have recently received a setback from Chief Justice Russell of the New York Court of Special Sessions, who believes that the citizens of New York are civilized to that degree that they may be assumed to favor the exercise of the police power in respect to such matters as dirty milk cans. These matters always hinge upon what the question of what constitutes oppression. Interference with the personal rights and liberties of the individual must be reasonable, that is to say, the welfare of others in the community must determine to what extent the police power is to be employed in a given case. New problems are constantly arising and the courts have to settle each case upon the individual merits and in the light of the foregoing considerations. It is easy to see that as civilization advances communities will tolerate less and less derelictions before which we now stand passively. It requires no great stretch of the imagination to picture a time when people who have a constitutional aversion to cleanliness will receive three-day notices to bathe or brush their teeth, or else be subjected to penalization, which would probably take the form not only of a fine but of forcible immersion.

(3) Kneeland P. 190.

The Friedmann Fiasco.

The drastic action of the Board of Health in so amending a section of the Sanitary Code as to deal effectually with the Friedmann nostrum is to be commended. It is positively refreshing to witness the strong hand of our sanitary forces placed upon this disgracefully exploited "cure" and upon its promoters. Here at least is one dubious thing which has been dealt with forcefully. The medical profession has for once abandoned its *laissez-faire* policy, a policy which has covered us with contumely too often. We have been frequently and justly reproached for not doing our duty at the proper time in such matters. It begins to look as if we intended to stand between the fakers and their dupes, for the aforesaid amendment is couched in broad terms that will enable the Board of Health to control all other hoaxes of the Friedmann brand.

We have seen an instance of what can be done provincially, so to say. No wonder the associated fakers fear the establishment of a Federal Department of Health, which would not be parochial in its operations.

The Use and Abuse of Coffee.

In the light of the data that have been accumulated in respect to the physiological action of coffee it may safely be affirmed that it is not injurious when used moderately by reasonably healthy people. With the neurasthenic and the dyspeptic it is a somewhat different matter. While alarming symptoms have followed the ingestion of enormous quantities, there is no evidence that fatally toxic effects have ever ensued. Coffee is a mild stimulant and the effects are rather transient. The moderate use of coffee will not make a well man sick. Such moderate use will not occasion disagreeable symptoms in the healthy, such as insomnia, headache, "nervousness," drowsiness, palpitation, dyspepsia, vertigo, etc. On the other hand it will obviate or relieve fatigue. It is this property of coffee which invites abuse. Balzac used to work for unconscionable stretches of time through the excessive imbibition of coffee, and we are all familiar with this phase of its abuse in the case of hard-working friends. It is altogether probable that even in the neurasthenic and dyspeptic its alleged bad effects are largely referable to a morbid attitude built upon freak propaganda on the part of health cranks and certain notorious commercial interests. A little coffee ought to be grateful to such people. We do not consider coffee a necessary concomitant of civilized life, which some extremists claim it to be. To our minds it is rather a luxury which it is not necessary to dispense with unless one is compelled to do so as a part of the attempt to combat the increasing cost of living. As to the moderate use of any of the things which we ingest the same principles apply. Even such a valuable substance as milk has to be imbibed within reason as to quantity, lest autointoxication ensue.

Disease a Removable Evil.

The fact is being borne in more and more upon our governing powers that health is purchasable, and it is a gratifying fact to observe that our municipalities are making larger appropriations to this end. The medical profession has much exact knowledge regarding the prevention of disease which has not been applied on a large scale. It is still unable to apply this knowledge and has to bear many reproaches because of the failure of communities to avail themselves of it. The profession is not to blame for the niggardliness of unenlightened communities. It cannot be denied that the profession is doing its full duty in the way of educating the public in regard to prophylactic measures having to do with a class of diseases heretofore considered outside the sphere of public intervention, because non-infectious. There are many removable causes of disease that can and will be dealt with more and more, with the result of extending the working period of life well into old age and the prevention of disabilities of various kinds. Socia land individual hygiene will be more intensively taught and great sanitary reforms, such as the medical patrolling of our waterways, with a view to the prevention of unnecessary pollution, will be instituted. The prophylaxis and venereal disease, in many ways the most important reform in our social condition, is still a far off desideratum, and must lag behind other reforms because of the feeling in certain quarters that such activities tend to encourage vice. The medical profession is hampered greatly by reactionary influences of all sorts and in judging its achievements due allowance must be made for conditions over which it has but little control.

The Food Factor in Disease.

Professor Giddings, of Columbia University, is one of those who see in the economic exploitation of the masses a very large factor in the causation of disease, crime and human inefficiency. It is a conservative estimate that one-third of the people in the large cities of the country do not get enough to eat. These cannot be expected to make a winning fight against tuberculosis. Giddings thinks that human beings who have made it possible to cross the ocean in five days and who have made it possible to communicate the state of the entire world into editorial rooms all over the world every day and night could, if they wanted to, bring it about that all persons in the world would have enough to eat. Millions never have enough to eat in a world in which hundreds of millions worth of things are wasted every year. Business men who are not in the least likely to die in the poorhouse maintain barbaric conditions in their factories and oppose decent legislation to improve these conditions. Giddings asks how long the able, influential, up to date business men of the world are going to leave these questions to the people they call agitators. He thinks it will be the work of the dangerous agitators to rectify conditions unless others wake up and make it their business—and soon. Otherwise we are fated to have loss of life and property and needless bloodshed.

The medical profession is taking a decided interest in the bearings of economics upon disease. Nobody knows better than the physician the relation of underfeeding to tuberculosis and the ineffectiveness of crusades that do not include changes in the social order.

Do not neglect to examine the urine in all cases of stubborn eczema about the genitals of either sex.

Medical Editorial Table

The Elimination of Mercury.

After intramuscular administration of either soluble or insoluble compounds of mercury the daily elimination by the urine reaches up to 5 mg. After inunctions the kidneys excrete 1 or 2 mg. per day. It is by no means decided yet whether the mercury acts directly as an agent destructive to the infectious organisms which it is intended to combat, or whether the influence is an indirect one exerted in stimulating the body toward greater antitoxic effort. Of especial practical importance is the contention that the kidney cannot excrete more than 10 mg. of mercury per day without liability to damage. Renal irritation and albuminuria are prominent symptoms, according to Buchtala. The question is thereby raised whether the injection of masses of insoluble mercury compounds under the skin to serve as depots for slow solution is an entirely safe procedure. This certainly is the case only when an unduly rapid solution and transport of the mercury will assuredly not ensue. In the light of what has been said the method is at best a questionable one and is discountenanced in certain quarters. Iodides in conjunction with mercury lessen the output of the latter in the urine. This may be due to the formation of insoluble compounds of mercury and iodin or of soluble but little ionized mercury-iodin compounds. Animal experiments show that the patch of elimination for mercury is not solely by way of the kidneys. The bowel may also participate in the excretory function, quite in harmony with what is observed in the case of various other elements.—(*J. A. M. A.*, May 31, 1913.)

The Cause of Death in Acute Intestinal Obstruction.

The similarity of the constitutional symptoms in acute peritonitis and acute intestinal obstruction has long been recognized. Enough data are at hand to show that a patient with fatal acute peritonitis dies from much the same cause as does a patient with fatal acute obstruction. Septic absorption from the peritoneum is not the vital factor. The serious symptoms arising in intestinal obstruction are due to a toxic substance or substances formed in the intestinal mucous membrane. Stone, Bernheim and Whipple have isolated a toxic principle from the mucous membrane of obstructed product. They found thatit is not a bacterial product. It causes symptoms of ileus when injected into an animal; it is found in increasing quantity or virulence from the ileum to the duodenume and it is not found in the unobstructed bowel. Animals may be rendered less sensitive to intestinal obstruction by graduated doses of this substance. The loss of body fluids is another factor to be reckoned with. Patients with acute obstruction who are purged or who lose fluids by vomiting do badly; and it is well known that improvement follows the restoration of fluid to the tissues.—(*American Journal of Surgery*, May, 1913.)

Infant Mortality.

With the approach of the summer season preparations should be made to combat the mortality among infants. From one-third to one-half of the baby deaths are recorded during the months of July, August and September. During the year 1912 the infant mortality in the whole State of New York was 109.9. In 1904 it was 151. The decrease keeps up and is by no means accidental, but is due to the increasing activities of local health boards in providing pure clean milk for general

consumption. It is also likely that the establishment of infant welfare stations and the instruction which mothers receive at the same relative to the proper care and feeding of the infant have also played their part in this reduction. There are three remedies for the still high infant mortality: (1) State control of the supply and distribution so that good milk can be brought within the reach of all at a price which the poor as well as the rich can afford. (2) Education of the mothers along the lines already undertaken in a small way in some cities and towns. (3) Fly extermination. Of these remedies the public is ready to partake freely of the last two. The first one is perhaps so suggestive of socialism that it will be opposed by many who fear the results of any movement in the way of State control of business undertakings, yet the water supply of our towns and cities has long ago been taken over by the municipalities and considered in its true sense the problem of a pure milk supply is as much of a public function as that of the water. So long as competition remains in the business of supplying this necessity of life we can expect that poor milk will always be the only kind which poor people will be able to buy. At the present time this phase of the subject is rendered less acute in many cities owing to the charity of the rich. But this supplying by charitable means what should by rights be within the reach of the poorest purse is only a temporary and at the best a poor makeshift.—(*Medical Record*, May 10, 1913.)

The Abuse of Habit-Forming Drugs.

The lack of uniform laws in all States regarding the sale and use of poisonous drugs is largely responsible for the enormous increase in their consumption. The mortality statistics of the Census Bureau report that for the last ten years the annual average of deaths indirectly due to poisons other than alcohol has reached the appalling figure of 5,000. It is only in the last sixteen years that the bulk of our anti-narcotic legislation has been enacted, and the rapid spread of the use of narcotic drugs shows the impracticability of these laws. It has been estimated by the best medical authorities that 50,000 pounds of opium annually should suffice for the legitimate needs of the American people. We use 400,000 pounds, while Germany, with a population of 60,000,000, consumes only 17,000 pounds of opium yearly. We use about eight times as much as we should. Fully 75 per cent. of our annual opium importation is manufactured into morphine, and probably 80 per cent. of such morphine is used by victims of the habit, so it becomes apparent that the situation needs the careful attention of our legislators. The use of other habit-forming drugs, such as chloral and allied hypnotics and cocaine, of which 150,000 ounces are taken illegitimately every year, is also on the increase and calls for similar treatment by our legislators. The dangers which beset us from drug addiction are not overstated. The remedy would seem to lie in Federal enactments which would be equally applicable to all States.—(*Boston Medical and Surgical Journal*, May 8, 1913.)

The Tuberculinlike Action of Antityphoid Vaccine.

Vincent has shown that antityphoid vaccine acts like tuberculin in stimulating latent or quiescent lesions into the active stage. The medical profession should hold the matter of compulsory vaccination in civil life *sub judice*. The surgeon general himself reports a striking case in which pulmonary tuberculosis manifested itself in very active form immediately following vaccination, its existence in latent form not having been suspected. It is true that over one hundred thousand immunizations have been made in the Army and that this case was the only one in which noteworthy features manifested themselves, yet it must be remembered that soldiers are picked men who lead an out of door life and not to be compared with civilians as regards liability to latent or active tuberculosis. Antityphoid vaccination is justifiable in the Army, especially when the fact is borne in mind that typhoid fever is the scourge of camp life, but in civil life the conditions are such as to inspire the need of greater reserve. English and American observers have reported as much as from two to four per cent. of severe reactions, while the general mortality of typhoid fever in the United States is 29.5 per 100,000, or less than one-thirtieth of one per cent. In other words, to protect thirty individuals in 100,000 from death from typhoid fever by vaccination we would have to expose 2,000 to 4,000 of them to the possibility of stimulating into activity dormant or latent tuberculosis! While the latter disease would doubtless develop in but a small proportion of those exposed, the fact remains that great prudence is in order when the use of antityphoid vaccine in civil life—which includes a multitude of overworked and underfed individuals who labor in sweatshops, mills and other foci of tuberculous infection—is advocated.—(*New York Medical Journal*, May 3, 1913.)

Felons.

G. M. Dorrance, Philadelphia (*J. A. M. A.*, May 10), describes the fascia and circulatory apparatus of the finger-tips and how a felon develops. As regards treatment, he objects to waiting for suppuration to occur before incision and also to the usually recommended longitudinal incision which does not allow free drainage and requires packing to keep it open and leaves an ugly scar beside injuring the tactile area. Kanavel's method of two lateral incisions is much better, but this also tends to close up and requires packing. The method he recommends and which he has found to give excellent results even in severe cases is described as follows: The incision starts at the level of the base of the nail on one side and extends in the line of the skin furrows over the tip of the finger, up the opposite side to a point on the level with the beginning of the incision, in that way making a flap of the tip of the finger. A piece of rubber tissue or gauze impregnated with petrolatum is placed in the uppermost angle of the wound. The wound is dressed in normal salt solution and the dressings, which are kept moist, are renewed each day. The rubber tissue will come away about the third day and no subsequent packing will be needed. A general anesthetic is advised, preferably nitrous oxid.

Summer Courses at Long Island.

The Long Island College Hospital is showing the up-to-date spirit pervading its faculty by offering advanced summer courses.

These will include post-graduate work in genito-urinary diseases under Professor H. H. Morton, Adjunct Professor H. E. Fraser and Instructor J. S. Read; bacteriology and pathology, including serological diagnosis and hematology under Professor William Lintz; diseases of the stomach under Instructor H. W. Lincoln, and chemistry under Assistant Professor Matthew Steel.

The courses offer medical men an excellent opportunity to improve the dull summer months in one of the best equipped medical schools in the country at a very moderate expense.

Pediatrics

Diphtheria in Different Forms.

J. D. Rolleston has collected some interesting data on diphtheria.

During 1911 there were 5,034 cases admitted to the Metropolitan Asylum's Board Hospitals, London, as compared with 3,634 during 1910. Exclusive of purely bacteriological cases the percentage mortality was 8.5. The mortality at the various hospitals ranged from 7.4 to 10.8 per cent. Among 862 laryngeal cases there were 135 deaths, a mortality of 15.6 per cent. On 297 tracheotomy, on 56 intubation and on 20 both operations were performed, among whom were 81, 4 and 14 deaths respectively. The percentage error in cases admitted was 12.7. Among the 753 wrongly certified as diphtheria were 485 of tonsillitis, 47 of laryngitis and 22 of broncho-pneumonia; 24 had no obvious disease or were not diagnosed. Of complications paralysis occurred in 11.5 per cent., albuminuria in 12.5 per cent., and otitis in 5.3 per cent. Serum rashes were noted in 30.6 per cent., joint pains in 5.1 per cent, and abscesses at the injection site in 0.4 per cent.

Sixteen cases of malignant diphtheria were treated at the Hôpital Bretonneau (*Thèses de Paris*, 1911-12, No. 298) in children aged from one to eleven years, ten of whom died. Cases were most prevalent in large families in which the children received little attention. Late and inadequate doses of serum were partly responsible for the high mortality. The gravity of the cases was due to diphtheritic intoxication and not to association with other microbes. In a large number death occurred early, before the throat had become clear or even before the membrane had begun to loosen, and was usually preceded by one or more of the following signs: vomiting, precocious paralysis of the palate, and abundant albuminuria. In several cases death occurred while the throat was being syringed. The symptoms were due to bulbar intoxication in the first place and possibly also to suprarenal insufficiency. As treatment large and early doses of serum are recommended associated with suprarenal opotherapy.

A girl, aged 12, ran a splinter into her foot in the middle of January (*Hospitalstidende*, 1912, LV). On the 31st there was an ulcer 4 by 2 cm. on the side of the foot, covered by a yellowish exudation. There was a profuse discharge of pus from the ulcer and the loosened epidermis. The wound slowly cleared up under local treatment, but some time between February 24 and March 3 the child found that she could neither read nor write. In addition to paresis of accommodation, the heart was found to be dilated and the pulse rapid, small and irregular. The ocular palsy lasted for about three weeks and cleared up without treatment, and the cardiac condition lasted for a few weeks longer. No bacteriological examination was made, as diphtheria was not diagnosed until after the onset of paralysis, when the wound had healed.

Dreyfuss records a fatal case of anaphylaxis in a boy, aged 7 years, suffering from moderately severe diphtheria, who one year previously had received a prophylactic injection of 150 units of diphtheria antitoxin. (*Münch. med. Woch.*, 1912 LIX). In one and a half to two minutes after the second injection the child complained of itching in the legs and trunk, and this was rapidly followed by vomiting, clonic convulsions of the limbs, loss of radial pulse, dilated pupils and unconsciousness. Dreyfuss recommends that in cases that have been previously injected the serum of a different animal should be employed.

Calcaterra records some interesting observations at the Pediatric Clinique at Bologna (*Riv. di clin. Ped.*, No. X, 1912). In 61 cases injected on the first day of disease the percentage of paralysis cases was 1.6, in 377 second-day cases it was 9.5, among 257 third-day cases 16.3, among 101 fourth-day cases 21.7, in 52 fifth-day cases 15.3, in 19 sixth day cases 26.4, and in 13 seventh-day cases 15.3. Large doses of serum, though they did not always succed in preventing paralysis, considerably diminished their gravity. A bivalent serum, *i. e.*, one with antitoxic and bactericidal properties, did not possess in this respect any advantage over ordinary antitoxin. Twenty-two cases received intra-spinal injections as well as subcutaneous. This new method did not prevent the appearance of generalized paralysis or appear to render it less severe. Two of the cases so treated showed signs of transient meningeal irritation, revealed by headache, vomiting, nuchal rigidity and Kernig's sign. Ten cases of diphtheritic paralysis were treated with subcutaneous injections of serum. Almost all showed signs of anaphylaxis, and none showed any improvement that could be attributed to the serum. Calcaterra agrees with Mya that serum-therapy in diphtheritic paralysis is useless.

Lydia M. DeWitt (*Journ. Infec. Dis.*, No. X, 1912), in a series of 175 cases of diphtheria, found that the duration of the Klebs-Loeffler bacilli was less than thirty days in 63 per cent., between fifteen and thirty-five days in 87 per cent., under fifteen days in only 12 per cent., and over forty days in 12 per cent. The work on the treatment of diphtheria carriers with a staphylococcus spray (as reported in *Brit. Jour. of Child. Dis.*, 1912, No. IX) induced her to carry out experiments to determine whether an antagonism existed between *Staphylococcus aureus* and Klebs-Loeffler bacilli. Test-tube experiments showed that the organisms grew well together, and that a killed staphylococcus culture formed a good medium for the growth of diphtheria bacilli. Experiments on rabbits and guinea-pigs showed that though Klebs-Loeffler bacilli frequently disappeared more quickly in animals treated with staphylococcus cultures than in those untreated, this result was not constant, and the clinical symptoms were often more severe under staphylococcus treatment. In 28 per cent. the diphtheria bacilli persisted longer in the treated than in the untreated cases. In two diphtheria patients in whom she employed the treatment, diphtheria bacilli reappeared after two negative cultures had been obtained. The writer suggests that the apparently favorable action of *Staphylococcus aureus* is due, not to an incompatibility between the two organisms, but to the reinforcement of the normal throat flora.—(*Brit. Jour. Children's Diseases*, No. 1, 1913.)

Infantile Diarrhea.

The use of the following combination is highly recommended by H. A. Ellis in the treatment of the more severe forms of infantile diarrhea:

℞ Magnesii Sulphatis.....ʒj-ij (4.0-8.0 Gm.)
Mucilaginis Acaciæ.....fʒss (15 Cc.)
Phenylis Salicyl.....gr. v-x (0.3-0.6 Gm.)
Glycerini .....fʒiij (12 Cc.)
Aq. Chlorof.....q. s. ad fʒiij (90 Cc.)—M.

One teaspoonful is given every one, two or three hours, sleeping or waking, vomiting or not. Glycerin is further added when the urine is concentrated, and a little sweet spirit of niter is given separately when this is very marked. In a small proportion of cases the salol disagrees, causing nausea and vomiting, and is then omitted. The character of the stools is taken as guide to the frequency of administration of the preparation.

If the blood in them does not diminish, the number of doses should be increased. Continuous use of the medicine, even at night, is essential, even in children less than a month old. There should be no reduction in the doses till the "slime" has disappeared from the stools. —(*Australian Med. Gaz.*, Jan., '13.)

Meningitis of the Epidemic Type in Children Below Two Years of Age.

Henry Koplik, of New York, calls attention to the important problem presented by the diagnosis and treatment of cerebrospinal meningitis in children below two years of age, this dread affection having been deprived of many of its terrifying aspects in older children, owing to our modern advances in methods of diagnosis and treatment. In these older children the prognosis equals that of a lobar pneumonia, sometimes being even better. Often the outlook is not worse than in any of the ordinary affections of an infectious nature in childhood. But the younger children often present misleading symptoms and an early diagnosis is not so-apt to be made. Text-book descriptions are not always definitely exemplified and the physician may not even entertain a thought of meningitis. Large numbers of infants are received at hospitals quite late in the disease without any diagnosis having been made. Without lumbar puncture it is often difficult to come to a conclusion. This is particularly true if a case is complicated by pneumonia. Pneumonia itself will often give cerebral symptoms, such as restlessness, rigidity, and retraction of the head. Then young cases of meningitis may present no rigidity. An otitis may mislead us into the feeling that we are dealing with a purulent ear disease instead of a meningitis, until high temperature, increasing restlessness and finally the appearance of neck-rigidity show us that we have had a meningitis from the outset. Quite a number of the diseases of childhood occasionally give cerebral symptoms. The Kernig is of little value in these very young patients, being often absent in meningitis. As to convulsions, so many diseases have these as initial symptoms that we cannot assume that in every such case a meningitis is present. We must never lose sight of the possibilities and perfection and accuracy in diagnosis are essential. Delay is more serious in a baby than in an older child. A tense fontanelle is of some value, but is apt to mislead the most expert when a crying spell is present. Macewen's percussion note over the frontoparietal juncture may help in determining increasing fluid in the ventricles. This note is normal in rachitic infants. The mortality in infants is high, running as high as 75 per cent. The earlier the injections of Flexner's serum the more certain the therapeutic effects. Puncture of the ventricles in these young patients has not been very successful in Koplik's hands. In practising lumbar puncture in infants fluids should be withdrawn slowly and with the greatest caution and the serum introduced very slowly in order that traumatism and extreme changes of pressure be avoided. In order that treatment may be instituted early, lumbar puncture should be made at the outset in suspected cases, since so much depends upon early introduction of the serum. The necessity of repeating the puncture and introducing more serum may be determined largely by the temperature, but if a child is very restless, even though the temperature is normal, fluid should be withdrawn and examined for bacteria. If the fluid be cloudy, introduce the serum without waiting for actual cultures. In late cases the foramen of Magendie may have been occluded, in which case lumbar puncture is fruitless. The hopeless picture of posterior basic meningitis then develops. As has been said, ventricular puncture in such cases, theoretically promising, is not successful in practice. Finally, we must be cautious in announcing a cure in these cases until the lapse of several weeks of normal temperature, etc., because of the possible occurrence of late hydrocephalus.—(*J. A. M. A.*, June 7, 1913.)

Infections of the Upper Urinary Tract in Infancy and Childhood.

Robert M. Green, of Boston, after a review of the literature and the study of clinical cases, offers the following conclusions:

1. In infants and children infections of the upper urinary tract, though infrequent, are likely to occur without adequate apparent antecedent cause.
2. Their onset is acute, their clinical picture definite, their recognition often missed on account of their simulation of other infectious conditions.
3. Their two most usual forms are acute pyelitis and acute inflammatory nephritis.
4. The latter is most usually hematogenous in origin, the former probably proceeds by lymphatic extension from the intestine.
5. Predisposing causes are calculi, constipation, phimosis, anal fissures, and foci of infection elsewhere.
6. The classic signs of both are pyrexia, pyuria, and tenderness in the costovertebral angle.
7. Differential diagnosis depends on examination of the urine.
8. The treatment consists in rest, milk diet, aqueous diuresis, moderate catharsis, urotropin, with sodium benzoate, potassium citrate, or vaccine, in obstinate cases; surgery, only as a final measure.—(*Boston Medical and Surgical Journal*, May 1, 1913.)

Prevention of Deafness in School Children.

Jacques advocates the examination, physical and functional, of the organs of hearing and of the upper air-passages in every child on entering school. By doing so, not only can ear diseases present be adequately, and in more than half the cases, successfully treated, but those potential can be prevented. Moreover in cases where deafness has already reached a stage when little can be done for it, proper pedagogic treatment can be indicated. Jacques insists upon the importance to the child's career and social future that prophylaxis of deafness should not only be indicated, but carried out.—(*Journ. de med. de Paris*, 1911, xxvi.)

Decayed teeth harbor pyogenic organisms and constantly threaten the integrity of the cavities which drain into the mouth. It is entirely possible that an acute purulent inflammation of a root of a tooth should extend to the maxillary antrum and produce a general uveitis resulting in blindness, as has indeed actually been the case. The importance of this source of trouble becomes apparent when we note the prevalence of carious teeth among school children as reported by our school physicians.

Never neglect to obtain the consent of the parents, *in writing*, before commencing treatment of scalp ringworm with X-rays in a child. Many a physician has overlooked or neglected this important matter much to his chagrin, when the case has not resulted as favorably as he anticipated.

Surgery

Appendicitis in an Infant Sixteen Days Old with Appendix in an Inguinal Hernial Sac.

Charles M. Remsen, of Atlanta, Ga., reports this interesting condition in a male baby admitted to Johns Hopkins Hospital May 24, 1911, on account of persistent vomiting, with red colored stools.

The infant had been born 16 days before in the obstetrical service of the hospital after a normal labor.

When twelve days old the patient began to vomit, and this persisted "every two or three minutes for first two days." Following this, vomiting became much less marked but stools were lumpy and red. May 23 a lump was noticed in the right inguinal region which was extremely tender on palpation.

When admitted to the ward the infant was very restless, continually crying, and jerking its extremities about very actively. From the right external abdominal ring protruded a swelling which filled the ring completely on the one hand, and on the other extended well down to the lower limits of the scrotum and surrounded the testicle and cord so that it was impossible to palpate these.

On operation the aponeurosis of the external oblique was divided parallel to its fibres from the external ring upward a distance of 4 to 5 cm. Underlying this was the continuation of the tense sac which had been felt as the portion of the tumor above the constriction. Below this was an entirely separate sac reaching along the cord to the bottom of the scrotum, which proved to be merely a hydrocele involving the tunica vaginalis and a part of the cord. In the upper sac was a definite hernial sac in which there was a markedly inflamed, indurated, and reddened appendix, on the surface of which were numerous splotches of fibrin. The distal half of the appendix, which was quite long (about 8 cm.), was caught in the hernial pouch and glued in this position by an outpouring of fibrin and the presence of some early delicate adhesions. The proximal half of the appendix was contained in the general peritoneal cavity and the hernial sac, at its neck, approximately bisected this organ. No bowel was in the sac, and the neck of the sac was neither strong enough nor tight enough to have caused strangulation of the appendix. On loosening the latter from its bed in the hernial sac there was no difficulty in withdrawing that organ from the peritoneal cavity; and enough cæcum was forced through the neck to allow the turning back of a peritoneal cuff on the base of the appendix, to crush and ligate the muscular and mucous coats at this point, to ligate, excise, and to turn in the base after carbolizing the stump, with a purse-string of fine black silk. The vessels in the mesappendix were ligated with the same material. After tying off the sac high up and allowing it to drop back into its bed after excising the redundant portion, the lower sac was attacked. This was for the most part excised, a small portion being left—enough to manufacture a small tunica vaginalis in order to avoid perhaps any difficulties in the future development of the testicle on this side. The closure of the canal was effected by drawing the cremaster under the internal oblique, the lower leapet of the external oblique aponeurosis over the internal oblique and finally the upper leaflet of the external oblique aponeurosis over the lower leaflet of the same structure.

The patient made an uneventful recovery and left the hospital in 10 days. Inspection of the child about six weeks later showed its general condition to be normal. Locally the seat of operation showed a firm ring, through which the cord passed into the scrotum. The cord and testicle were normal. There was no evidence of any existing hernia.—(*Annals of Surgery*, December, 1912.)

The Treatment of the Prostatic.

G. Morgan Muren, of New York, bases his paper upon a personal experience gained from 131 prostatectomies and the treatment of almost an equal number of cases in which drainage alone was undertaken, or in which no operative procedure was considered possible. Ideal patients for prostatectomy are rather rare. Such a patient should have a clean bladder, a fairly sound heart, and reasonably good arteries and kidneys. Complete obstruction to the outflow of urine, relieved only by the regular use of the catheter, is a positive indication for prostatectomy. Cases that are not ideal require as careful consideration as any in surgery. Operation should not be undertaken until after careful toilet of the bladder, unless obstruction is so complete that the passage of any form of catheter is impossible. Undesirable cases are usually treated by their family physicians until increasing obstruction or total retention requires the advice of a surgeon. Much can be done in the way of preparatory treatment with the cases that have presented partial obstruction for years, with or without occasional retention. Thus careful attention to the diet, bowels, bladder washing, followed by a couple of drams of 5 per cent. argyrol left in the bladder, and the internal administration of one of the urinary antiseptics, may carry inoperable cases along fairly well, while such measures may also result in such improvement that an operation can finally be considered. Careful living and the avoidance of exposure, particularly the wetting of the feet, will greatly lengthen the periods between attacks of acute inflammation with retention. Suprapubic or perineal drainage may have to be established in some of the cases—the first step of the so-called "two-stage" operation. Whether this preliminary step is followed by removal of the gland will have to depend upon the degree of improvement that ensues. Sometimes it is impossible to do the second step of the operation, when permanent drainage will have to be established. Thorough drainage often works wonders through uninterrupted sleep, the cessation of the constant and imperious desire to urinate, and the lessened bladder irritation. The patient gains strength and final removal of the gland may be undertaken. The author believes that contracture of the neck of the bladder occurs far more frequently than is commonly supposed, and that it is sometimes mistaken for prostatic obstruction. If such a condition is discovered during operation, and the supposedly enlarged prostate found not to be the cause of the retention, the necessary treatment may be carried out with much less shock, hemorrhage, and destruction of tissue than in prostatectomy. Another condition simulating prostatic obstruction that must be borne in mind is loss of the bladder reflex in locomotor ataxia, oftentimes the first reflex to be lost in this disease. Many of these cases have been operated upon unwittingly. Muren has had but little experience with the suprapubic operation, but argues against it on the ground that drainage is poor, that shock is greater, and that a sink-like pouch is left at the site of the prostate into which bacteria and urinary debris settle. At the same time he admits the frequent difficulty of perineal enucleations, owing to close ischial tuberosities, depth of perineum, and the resistence of the gland to the trac-

tor used to bring it down into the perineal wound. He concedes the consensus of opinion to be that the large soft prostate should be removed by the suprapubic route, and the small fibrous gland by the perineal. He also believes that, whether operators have advocated one or the other route, the literature has been entirely too optimistic, and misleading in respect to mortality.—(*The Urologic and Cutaneous Review, March,* 1913.)

Multiple Gunshot Wounds of Intestine Without Perforation of Lumen.

Major Robert M. Thornburgh, U. S. Army, reports the case of a soldier suffering from a self-inflicted gun shot wound of the abdomen, caused by a .30 calibre Springfield rifle.

Wound of entrance: 3 cm. x 2 cm. diameters, 5 cm. to left and 2 cm. above umbilicus, a knuckle of ileum protruding. Wound of exit: 1 cm. diameter, directly above left posterior superior spine of ilium at level of umbilicus.

On laparotomy 12 mesenteric vessels were found bleeding profusely. They were ligated and hemorrhage controlled. It was found that 35 cm. of ileum was completely denuded of its peritoneal and most of its muscular coat. Its mesentery was destroyed. There were three wounds in the descending colon and very numerous wounds of the mesenter. No perforation of the intestinal lumen could be demonstrated. The wounds of the colon were inverted with purse strings or Lembert's. The patient was in such a condition of profound shock that resection of gut and mesentery was out of the question, so the operator substituted omentum for the outer two coats of the ileum as well as for both layers of mesentery. The omentum was brought down and sutured to the superior surface of mesentery and gut by interrupted sutures. It then was carried over to the inferior surface and attached in like manner. A portion of the omentum protruding from the wound of exit was amputated.

The patient was drained in front and behind and placed in the Fowler position with the Murphy drip for the first 24 hours. The drip was discontinued after the first 24 hours and not resumed. The Fowler position was maintained for about two weeks.

The convalescence was perfectly normal and the patient recovered.

Thornburgh has not found any such procedure described in the surgical literature.—(*Annals of Surgery,* Dec., 1912.)

Acute Intestinal Obstruction.

Richard A. Barr, of Nashville, emphasizes the following points in respect to intestinal obstruction:

1. Digestive disturbances, with colic, following abdominal operations, should be treated with opiates and not by purgatives.

2. A suspected mechanical obstruction should never be treated or tested by purgatives by the mouth.

3. Under such circumstances the painful peristalsis should be quieted with opiates. Attempts to move the bowel should be made only with enemata.

4. Patients with suspected strangulated of the bowel, or with mechanical obstruction of any type that does not yield promptly to opiates, gastric lavage, purgative enemata, and hypodermoclysis, should be treated by section.

5. In all patients, except desperate cases that are operated on, a search should be made for the obstruction, provided no adhesions are present. This search should, if possible, start with the cecum, and should proceed up or down the gut, as determined by the flaccid or distended state of the cecum.

6. If the obstruction is not located after a brief search, enterostomy should be done at the lowest point in the distended gut that is practicable. This should be made by fastening in a rubber tube with sutures, after the manner of a Kader or Senn gastrostomy.

7. When resection is done for damaged gut, and anastomosis is considered justifiable, use the lateral suture method, and establish gut drainage by fixing the proximal end of the gut in the operating wound, or in a stab wound, after fixing a tube in it by two or three successive purse strings of catgut. By this means the proximal bowel is given an outlet for its accumulations, and the suture is absolutely relieved from stress and strain due to distention of the gut. Spontaneous closure of the fistula is practically assured, since a portion of it is lined with peritoneum.—(*New York Medical Journal,* May 31, 1913.)

Cancer Killed 44,024 in 1911.

Cancer, which term includes malignant neoplasms of all kinds, caused 44,024 deaths in the registration area in 1911. The death rate, 74.3 per 100,000, was slightly lower than that for 1910, 76.2, but higher than that for any earlier year for which records are available. The highest crude death rate from cancer among the registration States was for Vermont, 101 per 100,000 population, a condition due to the relatively high age distribution of the population and the negligible amount of immigration. Other States with high dates were Maine, 98.6; New Hampshire, 96.8; Massachusetts, 94.4; and Rhode Island, 88, while the lowest rates are shown for Montana, 40; Kentucky, 42.7; Washington, 46.1; Utah, 51.9; and North Carolina municipalities, 54.8.

Among the cities of 100,000 population and over in 1910, in which many deaths from cancer occur in hospitals of patients brought there for operation, those having the highest death rates from this disease were Albany, 122.8; Boston, 111.2; San Francisco, 110.6; Oakland, 105.3, and Cambridge, 104.1; those with the lowest rates were Memphis, 51.9; Seattle, 57.4; Atlanta, 61.2; Detroit, 65.1, and Jersey City, 65.5.

Renal Tuberculosis.

Tuberculosis of the kidney is usually primary and unilateral and is practically never the result of an ascending infection. In the early stages correct diagnosis is difficult, because the symptoms point to the bladder rather than to the kidney. Positive diagnosis is only made by tracing the bacillus of tuberculosis found in the urine to the affected organ. If the kidney is removed before the second kidney becomes involved and before general systemic infection occurs, the cure is usually permanent. Slight tubercular infection of the second kidney or other organs is not a contra-indication to operation.

With the approach of death from any cause, the blood-pressure tends more or less rapidly toward zero. The rapidity with which this occurs, and its relation to the actual cause of death, are determined by so many factors about which very little is known, that little that is really definite can be said. According to Janeway, in protracted illness, pressure as low as 60 mm. (5 cm. cuff) may persist for several days before death. In such cases the hypotension is of some value as a sign of impending dissolution, but as a rule the terminal fall in pressure is usually a matter of minutes or hours.

Obstetrics

Indications for Cesarean Section.

T. Mitchell Burns of Denver gives the following indications for the performance of Cesarean section:

First, when there is non-engagement of the head due to obstruction.

Second, when there is non-engagement of the head and a condition necessitating rapid extraction, which cannot be safely performed by the vaginal route.

The usual obstructions are:

1. Contracted pelvis.
2. Rigid cervix and excessive uterine retraction.
3. Tumor.
4. Large head, abnormal presentation or posterior position which cannot be corrected.
5. Atresia.

Contracted Pelvis.—Cesarean section is indicated when the conjugata vera is 3¼ inches (8 cm.) or less, and should be done as soon as the cervix is dilated two finger-breadths; or when the conjugata vera is more than 3¼ inches in a primipara, provided the head does not engage after the test of labor.

Symphysetomy is preferable when the true conjugate is more than 3¼ inches in a multipara.

Craniotomy is indicated when the true conjugate is 3 inches (7.5 cm.) or more if the fetus is dead.

Obstructing tumors are usually fibroids of the lower uterine segment, ovarian tumors impacted in the culde-sac, bony tumors of the pelvic wall and carcinoma of the cervix.

Fibroid tumors often flatten and slip out of the way spontaneously. If this does not occur, an effort should be made to displace them annually or by the knee-chest position. If they cannot be so displaced, they should be removed with or without doing a Cesarean section.

In carcinoma, sarcoma and certain fibroma, the Porro-Cesarean section, i. e., Cesarean section with partial or complete hysterectomy, should be performed.

The usual conditions which necessitate rapid extraction by Cesarean section are non-engagement of the head with:

1. Eclampsia.
2. Placenta prævia with rigid cervix.
3. Ablatio placentæ with active hemorrhage.
4. Beginning exhaustion or collapse of patient.
5. Death of the mother.

Eclampsia.—Cesarean section is indicated in eclampsia with non-engagement of the head, after medical treatment fails, in a primipara, or in a multipara with rigid cervix or a history of previous difficult labor. Medical treatment is considered to have failed in eclampsia if it does not stop the convulsions, lessen the coma and improve the pulse within an hour or two.

Abdominal section is preferable to vaginal in eclampsia in a primipara with rigid cervix, even if the head is engaged. It requires less time and is more favorable to the child.

Infected Cases.—So-called infected cases (i. e., those which have been long in labor, have been repeatedly examined, and even had the forceps applied) do as well after the conservative Cesarean section as after high forceps, and better than after the extraperitoneal or the Porro operation.

Porro-Cesarean Section.—Cesarean section, with partial or complete hysterectomy, is only indicated in cases complicated by carcinoma, sarcoma or certain fibroma. —(*J. A. M. A.*, Jan., '13.)

Results of Cesarean Section.

Asa B. Davis reports that during the past two years he has performed sixty-nine Cesarean sections with the following results:

Number of mothers who survived	65	94.21 per cent.
Number of mothers who died	4	5.79 per cent.
Total	69	
Number of children delivered	70	(Twins once)
Number of children who survived	62	88.57 per cent.
Number of children still-born	5	7.14 per cent.
Number of children born alive but died before leaving hospital	3	4.20 per cent.
Total fetal mortality		11.43 per cent.

The cause of death in the case of the four mothers who died was eclampsia in two cases. They were in deep coma upon admission and were having repeated convulsions never regaining consciousness. There was almost total suppression of urine. Both died the first day after delivery but their infants survived. One case was that of central placenta previa, antepartum hemorrhage, midwife examinations. Patient was much overcome by the heat. Her child was dead upon admission. The fourth fatal case was in a very large primipara who was said to have been in labor two days and private physicians had attempted high forceps. The pelvic bones were large and thick and there was well-marked flattening of the pelvis. The fetus was dead upon admission; it was very large, weighing slightly over 12 pounds when delivered. The head was high above the pelvic inlet and the uterus was so tonically contracted that the fetus was held as in a vise. In this case craniotomy would have been a most difficult and long operation, and quite as dangerous as that by the abdominal route. This patient died on the fourth day from general staphylococcic infection.

In the fatal cases the author thinks the operation had no bearing upon the final outcome. They would have died whatever the method of delivery had been, or if they had remained undelivered.

Tabis asks if women should be sterilized at the time Cesarean section is performed and answers it by quoting from one of his previous utterances in 1905 on the subject:

"Each operator must determine for himself whether it is wise or right to do an oophorectomy, a hysterectomy, or to otherwise sterilize these cases. The time does not seem opportune, nor the condition of the tissues favorable for such interference. Patients withstand repeated Cesarean operations now with infinitely less shock and traumatic injury and subsequent invalidism, than is experienced in one difficult high forceps operation." He adds that experience confirms his belief in this.—(*American Jour. Obstetrics*, December, 1912.)

Management of the Grave Emergency Cases of Extra-Uterine Pregnancy.

Farrar Cobb, of Boston, presents a study of 137 cases of tubal and interstitial pregnancy at the Massachusetts General Hospital during the nine years from 1902 to 1910, the object of which was to obtain information in regard to the wisdom of immediate operation in the desperate cases of rupture with severe hemorrhage.

The cases were divided into two classes: (1) The grave emergencies, with sudden symptoms followed by alarming hemorrhage, which cases need operative treatment at once; it is this class of case to which the writer has paid special attention, the number of which is 36. (2) The non-emergencies, with less alarming symptoms and signs of varying degree and kind. This second

class is further sub-divided into: (*a*) partial ruptures with recurring progressive and slight hemorrhages; (*b*) tubal abortions; (*c*) cases of unruptured tubal pregnancy.

A study of all the cases justifies these conclusions:

1. More than 33 per cent. of extra-uterine pregnancies occur in young primiparas.

2. Salpingitis, or pelvic infection, is not an essential or frequent causative factor.

3. Most of the cases of complete rupture with alarming hemorrhage occur in the early weeks; these are the cases that are rapidly fatal unless operated on. Cases that have gone two months or more are those that furnish the greatest number of non-emergency cases.

4. Cases of sudden, severe rupture, until signs of marked intra-abdominal hemorrhage are present, often simulate other grave abdominal emergencies with abdominal tenderness and spasm, high white blood count, fever and vomiting.

5. In grave emergencies with signs of extreme hemorrhage, operation should be done at once without waiting for a possible reaction.

6. In the less severe cases of tubal rupture, without signs of marked hemorrhage, a correct diagnosis is often difficult or impossible.

7. The menstrual history cannot be depended upon; many of the most alarming cases had skipped no period.

8. The character and location of the pain may vary within wide limits.

9. Tubal abortions are nearly as frequent as tubal ruptures. Cases of tubal abortion seldom give a history of skipping a menstrual period, but a history of continued slight flowing or dribbling since the last period.

Cobb believes that the following statements cover the case:

1. Immediate operation is the method of choice.

2. Delay even for transfusion is dangerous and fatal, and especially *delay with stimulation.*

3. With proper technic and use of intravenous salt solution the percentage of deaths directly due to operation will be very low.

4. In a very small percentage of cases direct transfusion will be needed and will save the small number of cases that would be fatal otherwise.

5. Direct transfusion should be done after operation, not before.

6. With the availability of infusion and direct transfusion, it is criminal for any operator of reasonable skill to delay.—(*Annals of Surgery,* Dec., 1912.)

During employment of the closed method of mixed narcosis, respiratory depression does not occur. When marked respiratory depression occurs in the open ether method of mixed narcosis, the closed method should be substituted. Should marked respiratory depression be found to continue after the operation and to cause anxiety, CO_2 should be administered, much diluted, in the inspired air.

Congestion, irritation and various disturbances, both functional and organic, of the uterus, tubes and ovaries in the female; the vesicles, urethra and prostate in the male; and the bladder in both, may result from chronic constipation. This is due both to the proximity of these organs to the lower bowel and to their close physiological relationship.

Wounds subject to bacterial invasion will not heal by primary union. They should be disinfected, only partially closed and thoroughly drained.

Ophthalmology

Eye Complications in Mumps.

Tronyo believes there are more ocular complications in parotitis than we generally believe. The conjunctivitis of mumps has the following characters: It is usually bilateral, it affects the whole of the mucosa, is never purulent, and is often accompanied by chemosis and palpebral œdema. Keratitis is much rarer; as a rule it is slight, but it may leave opacities. Two varieties of iritis may occur; an acute form leaving no residues, and a chronic form diminishing visual acuity and giving rise to synechiæ. The most serious complication is optic neuritis, which often ends in atrophy. Dacryoadenitis may accompany or follow the parotitis or may even be the only manifestation of mumps. It is characterised by considerable œdema of the lids, especially the upper, and is often associated with chemosis. It is recognized by the existence of a small and tender swelling in the position of the lacrymal gland. Its duration is on the average two or three weeks. Transitory palsies of accommodation and paralysis of the external or internal rectus, hemeralopia, glaucoma with proliferative retinitis, and episceleritis have also been noticed by the writer, who thinks the physician should bear the possibility of such complications in mind.—(*Theses de Lyon,* No. VIII., 1912.)

Vernal Conjunctivitis.

Vernal conjunctivitis is a spring catarrh and is a chronic affection of the conjunctiva, which is most commonly bilateral. No portion of the conjunctiva is exempt from involvement in the process, says Metz (*Jour. Ophth.,* March, 1913).

Attention has been called to small whitish or yellowish-white spots in the pericorneal hypertrophy. They are not well seen without a loupe, and give the impression of white colonies of microbes developed in a gelatin medium. They are present in all stages of the disease. Their duration is for about a week, when they disappear and others appear. They are really minute epithelial vesicles. The change in the conjunctiva of the upper lid is characterized by the formation of hard, flat papillæ, which are greatly projecting, pale, and sharply outlined.

A most striking thing in connection with spring catarrh is the nature of the secretion. This is usually scanty, mucous, mucopurulent, collecting in threads in the retrotarsal folds and on the adjoining membrane.

The patients affected with spring conjunctiva complain that with the first warm days of spring the eyes become red; that there is photophobia, lachrymation and itching, which latter symptom is constant and very annoying. Itchiness, or constant rubbing of the lids in young children, is very suggestive.

In the treatment of this condition protection of the eyes from light by the wearing of tinted glasses is of acknowledged advantage. For this purpose euphos glass would seem best, as it absorbs the ultraviolet rays, which smoked and amber glass fail to do. More convenient and efficient, possibly, would be the instillation into the conjunctival sac of some chemical means for the absorption of ultraviolet rays. Such a substance is the monoxyderivate of aesculin (obtained from the horse chestnut) and recommended by Unna for the protection of the skin. Ruhemann has employed, in the eye, a solution of this substance, which he called Aqua Zeozoni. He reports that instilling it into the conjunctival sac three or four times daily causes no irritation or

damage to the cornea even when used for months or even a year. It prevented continuously the dazzling effects of bright light.

Some authors hold that adrenalin is curative of the process, while other observers have not seen certain benefit arising from its use. The effects obtained from the use of astringents are in general disappointing. Some favorable reports have been made regarding the use of yellow ointment.

The results following the excision of the growths and of cautery have been by no means constant. Recurrences have been frequent.

Iron and arsenic have been prescribed for use internally. These general measures, as do most of those employed locally, do no more than palliate. Investigators tried the *x*-ray, but the results were disappointing While the treatment was of a certain value, yet it was by no means curative.

Very brilliant results have, however, attended the employment of radium, and at the present there seems no other method of treatment which can be so relied upon for almost certain curative effects as the exposure to its rays.

Optic Nerve Atrophy Following Olive Oil and Lanolin Injection.

This peculiar condition is reported by W. A. Tisher (*Ophth. Rec.*, January, 1913). Equal parts of olive oil and lanoline were injected under the skin June 20, 1912, for the removal of a wrinkle or frown between the eyes; no irritation occurring after this injection. About seven weeks after the first injection a second one of the same kind was given which produced so great a reaction that the patient was unable to leave the doctor's office until four hours after the injection. The patient says she felt as if the lower eyelid were being closed or pushed up and a great deal of swelling around the point of injection. She first noticed the loss of vision five days after the injection, and from that time the blindness was complete. The swelling at the point of injection persisted about two weeks, but the feeling that the lower lid was being pushed up lasted only several days. When she observed the loss of vision of the left eye she noticed a swelling of the inside of the right eye.

It is possible some of the injected fluid might have passed into the orbital cavity and caused pressure upon the optic nerve.

The right eye is now normal with vision of 20/20, but the left presents a picture of optic atrophy, although six months before the injection an oculist found 20/20 vision in each eye.

Which Kind of Pollen Produce Hay-Fever?

Of the many hundreds of varities of pollen examined by Dunbar and his collaborators concerning their respective hayfever-producing properties the following plants were found to be of particular etiological importance:—

Grasses generally, such as: spring-grass, foxtail-grass, rush-grass, couch-grass, etc., etc.; corn in general, such as rye, wheat, barley, oats, rice, maize; of other varieties of plants: honeysuckle, woodbine, Lilly of the Valley, cornflowers, Chrysanthemums, asters, evening primrose, liguster, spinach, thistle, sedgegrasses, etc., etc.

In Northen America certain hayfever-like symptoms are known by the name of autumnal catarrh, or fall hayfever, which—as indicated by the name—appear in autumn, say from August to October, and are caused by the pollen of several widely spread weeds, species of the genus Ambrosia and Solidago. Autumnal catarrh is unknown in Europe, as here Ambrosia, when reared artificially, hardly ever reaches the flowering stage and Solidago—under the name of Golden Rod—is met with very rarely, either as a decorative plant, or growing wild.

In Europe, the principal exciters of hay-fever are the pollen of rye and maize, of meadow grasses and cerealia generally. If on a warm, sunny and dry June morning we happen to pass a flowering rye field, we can see how with every breath of the wind a faint yellowish dust rises into the air: this is the flower-dust, the pollen of the flowering rye. Wet and cool weather interferes very much with the spreading of the pollen, hence the beneficial effect of such weather on the hay-fever patients. On the other hand infinitesimally minute quantities of pollen only are required to produce irritation with the more sensitive patients and, as may be calculated from the following figures, a few pollen grains are quite enough to set up the various symptoms in the most sensitive patients. The weight of pollen is exceedingly minute: of maize pollen 7 millions, and of rye pollen 20 millions weigh one gramme and the pollen causing autumnal catarrh are from four to eight times lighter still! Chemical analysis of rye pollen shows them to consist of 10,2% of water, 3,4% of anorganic parts (ashes), and 86,4% of organic substance. The latter is composed of 3% of fatty oil, 25% of carbohydrates (starch, etc.), 18% of nitrogenous non-albuminous bodies and 40% of albuminous matter. The albuminous parts only are toxic, i. e., cause hayfever. Of these, quantities as small as $^1/_{40000}$ milligramme are sufficient to produce attacks.

The injection of pollen-extracts into horses, for the purpose of serum-production, requires considerable quantities of pollen which are collected in the following manner:

On the approach of the flowering season of rye, maize, or solidago, a number of narrow flat rectangular zinc dishes are placed on long tables in a well-lighted room free from draught. The tables are covered with smooth paper and the dishes, raised about four inches above the tables, are then filled with water to about two-thirds of their capacity. As soon as the florescence of one or the other of the above-mentioned grasses set in, the flowering tops are cut off in the early morning hours, in lengths of about 14—16 inches; they are placed very carefully in paper-lined baskets and hurried to above-mentioned rooms, where they are at once placed into the zinc dishes with the cut ends well immersed in the water, allowing sufficient space between each stalk.

According to the weather and temperature the flowering tops, which go on "living" for a short time, begin to drop their pollen onto the paper with which the tables are covered. The pollen is then carefully collected and thoroughly dried *in vacuo*, as otherwise its inherent moisture and the ever-present bacteria and fungi would soon set up deterioration. Much more simple but yielding a far less abundant harvest is the gathering of pollen in the field itself, by beating and shaking the flowering tops (ears, etc.) in paper-lined boxes. The yield of pollen is most abundant about the middle of florescence, but much depends, of course, on the weather before and during this particular season. In cold and rainy weather a poor crop has to be reckoned with.

In the suture of tendons local anaesthesia by the "block"—Crile—method is all that is generally required, and is preferable to the diffuse infiltration of a dilute solution.

The Physician's Library

The Modern Hospital; its Inspiration; its Architecture; its Equipment; its Operation. By John A. Hornsby, M. D., Secretary, Hospital Section, American Medical Association; Member American Hospital Association, etc., and Richard E. Schmidt, Architect, Fellow American Institute of Architects. Octavo volume of 644 pages with 207 illustrations. Cloth, $7.00 net; half morocco, $8.50 net. Philadelphia and London: W. B. Saunders Company, 1913.

We have arrived at a time when hospital science has become a specialty in medicine, commanding the entire thought and energy of certain medical men, well endowed by nature with executive ability and by education with an abundance of technical knowledge. Such a science of necessity needs literature and Dr. Hornsby has added new laurels to his reputation as a hospital expert by writing a book which for elaborateness of detail, comprehensiveness and general excellence leaves little to be desired. Under the broad heading of hospital architecture, equipment of the hospital and operation of the hospital the complete minutiae of hospital construction and management has been carefully considered. Stupid indeed would be the persons who could not construct a model institution by following the lines laid down in this volume. The limits of book review do not permit us to treat this excellent book in the manner its great practical value warrants and we must be content with the remark that it opens a new epoch in hospital building and equipment and that no one interested in any way in planning or managing a hospital or public institution can afford to be without a copy for guidance and inspiration. The author went to Michael Reese Hospital, Chicago, as superintendent when it was a small, 75 bed affair. He resigned recently to become a consulting hospital expert and left a $2,000,000 institution of over 400 beds. It is of interest to note that Dr. Hornsby is to edit the new hospital journal, *The Modern Hospital,* which will make its appearance in September.

Commercialized Prostitution in New York City. By George J. Kneeland, author of the Report of the Chicago Vice Commission, with introduction by John D. Rockefeller, Jr., Chairman of the Bureau of Social Hygiene, and supplementary chapter by Katherine Bement Davis, Superintendent of the New York State Reformatory for Women. Cloth, 330 pages. Price, $1.30. New York: The Century Company, 1913.

The astounding revelations contained in this book should bring the blush of shame to those officials who are responsible for such conditions. The investigation by trained workers under the Bureau of Social Hygiene covered about 10 months in 1912 and the activities of 6,759 street walkers and 8,167 house prostitutes were looked into. Over 1,600 places given over to prostitution were examined and it was shown that more than 150,000 men daily patronize the public women of the city.

The volume of syphilis and gonorrhea—the precursers of paralysis, sterility, miscarriage, deformity, degeneracy and insanity—is appalling. An examination of 466 inmates of Bedford Reformatory, all prostitutes, showed that 90 per cent. had syphilis, gonorrhea or both, 170 of the girls having both diseases. This book will doubtless have the wholesome effect of temporarily, at least, cleansing the Augean stables.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume II. Number II. (April, 1913). Octavo of 171 pages. Illustrated. Published bi-monthly. Price per year: Paper, $8.00; cloth, $12.00. Philadelphia and London: W. B. Saunders Company, 1913.

One of the interesting features of this extremely valuable number is the time devoted to duodenal and gastric ulcers by Dr. Murphy, with a talk on the subject by Mr. Milne, of London. As we understand this subject better its importance looms up, and Murphy treats it in his usual enlightening manner.

The issue covers a variety of surgical topics and each is thoroughly covered.

Physiology. By Isaac Ott, M. D., Professor of Physiology in Medico-Chirurgical College. Fourth edition, revised and enlarged. Cloth. 911 pages, with 434 illustrations. Price, $3.50. Philadelphia: F. A. Davis Company, 1913.

When a text-book on physiology can go through four editions in nine years, it speaks volumes for the value of the work. True it is that Ott does not go so deeply into the subject as some authors, but we doubt if any physiology contains more practical knowledge.

He delves into the very important matter of internal secretions and brings out the best thought in relation to the ductless glands. He shows a series of X-ray kinematographs which portray human gastric and intestinal motions. Abderhalden's ninhydrin test for pregnancy, which is arousing widespread interest, is explained, and the results of Ott's investigations of the hormones of milk secretion are related. In short, the author has thoroughly revised a most dependable work and has incorporated every new feature known in the world of physiology.

For students the book is intensely practical. For practitioners it offers a pleasant reintroduction to a field which, as it explains the workings of nature, is always fascinating.

Gonorrhea in Women. Its Pathology, Symptomatology, Diagnosis and Treatment: Together with a review of the rare varieties of the disease which occur in men, women and children. By Charles C. Norris, M. D., Instructor in Gynecology at the University of Pennsylvania. Octavo of 521 pages, illustrated. Cloth, $6.00 net; half morocco, $7.50 net. Philadelphia and London: W. B. Saunders Co., 1913.

It has been a matter of comment among genito-urinary surgeons that so little attention has been paid by text-book writers to the subject of gonorrhea in women. This book will, therefore, be warmly welcomed by specialists as well as general practitioners. It is a distinct addition to the literature on gonorrhea and is of especial value on account of the singleness of purpose in limiting the discussion exclusively to the one sex.

(*Continued on p.* 20.)

Intestinal Antisepsis

has for many years been accepted with growing appreciation as the rational treatment in gastro-intestinal diseases that are the result of fermentation or putrefaction.

The class of remedies possessing the power to arrest the septic process, correct atonic relaxation and allay the inflammation is well represented in

BISMACOL

Each fluid ounce of which represents:

Bismuth Oxide Hydrated	12 grains
Magnesium Salicylate	1 grain
Geranium Maculatum	32 grains
Pancreatin	4 "
Potassium Guaiacol Sulphonate	4 "
Sodium Sulphophenate	1 grain
Chloroform	2 minims
Elm in Mucilage	10 grains

Bismacol is given with every reasonable assurance of success in diarrhea and dysentery, especially in the fermentative and choleric diseases incident to the summer season.

The finely divided Bismuth Magma supplies a uniform coating over the mucous membranes of the entire gastro-intestinal tract.

Bismacol is sedative, antiseptic and astringent without harshness or undue styptic effect that might interfere with the restoration of normal gastric function.

To any physician who has never prescribed Bismacol, or is unable to secure it from the local druggist or supply house, we will send a full size bottle on receipt of 50 cents to cover the delivery and packing expense. The regular price is 80 cents per bottle.

THE WM. S. MERRELL CHEMICAL COMPANY

CINCINNATI

A historic narrative of real interest serves as a pleasant introduction to the volume. The bacteriology, pathology and pathogenesis of the disease is the most exhaustive we recall on this important matter.

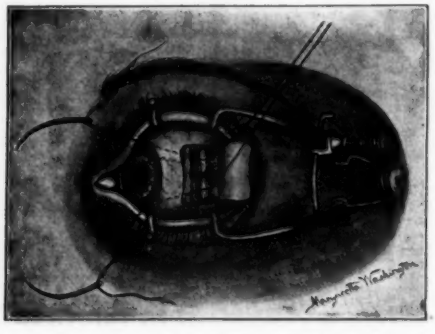
After a lucid exposition of sociology, prostitution and prophylaxis, the author takes up gonorrhea and its various complicating conditions and carefully goes into each condition.

If we were to commend any particular feature of the purely technical section, we would suggest the great importance of the chapters on Diffuse Gonorrheal Peritonitis and Gonorrhea During Pregnancy.

The reader will well agree with Dr. John G. Clark that a careful perusal of the work will convince one that this is "a highly instructive treatise, in which the many aspects of this complicated question have been most satisfactorily encompassed."

The splendid typography and the clearness of the illustrations add materially to the value of the volume.

Diseases of the Eye. By George E. deSchweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania. Seventh Edition. Thoroughly Revised. Octavo of 979 pages, 360 text illustrations, and seven lithographic plates. Cloth, $5.00 net. Half Morocco, $6.00 net. Philadelphia and London: W. B. Saunders Company, 1913.



The value of this book is attested by the fact it has appeared in new form on an average of once every three years for 21 years. It would be a reflection upon the intelligence of the reader to undertake a critical review of a work which has been standard for so long. This edition, rewritten and carefully edited, presents the latest in ophthalmology. The relation of vaccine therapy to ocular conditions is explained and the use of salvarsan in iritis, retinitis, keratitis, glaucoma and other eye diseases is elaborated upon. The author also goes into the new discoveries in ophthalmology of the last three years, and gives space to such conditions as Widmark's conjunctivitis, rosacea keratitis, marginal degeneration of the cornea and blue sclerotics, as well as to various new operations.

This edition, splendidly printed and illustrated, offers the reader all he can desire in knowledge of the eye and its diseases.

The Walled City. By Edward H. Williams, M.D., Assistant Physician at the Manhattan State Hospital, New York. Cloth. 263 pages. Illustrated. New York: Funk & Wagnalls, 1913.

This is a story of the criminal insane, told in narrative fashion. It is a well chosen admixture of the various elements which make up life in a hospital for insane convicts, with anecdotes of actual occurrences. The book is interesting and gives one an insight into many phases of the existence of our criminal unfortunates.

The Modern Treatment of Nervous and Mental Diseases. By American and British authors. Edited by William A. White, M. D., Superintendent of the Government Hospital for the Insane, Washington, and Smith Ely Jeliffe, M. D., Ph. D., Adjunct Professor of Diseases of the Mind and Nervous System in the New York Post Graduate Medical School. Vol. I. Cloth, 867 pages. Illustrated. Price, $6.00. Philadelphia: Lea & Febiger, 1913.

If the first volume is any criterion this series will be to nervous and mental diseases what some of the other great series have been to the various specialties in medicine. The list of authors includes many of the leading psychiatrists and neurologists in America and England and they truly have presented "a consistent and fairly comprehensive outline of a rational therapeutics of the diseases of the nervous system, including those of the mind." A unique and altogether valuable feature of this series is that, recognizing the great importance of a wider lay knowledge of mental hygiene, this work has been prepared in such a manner that it appeals to the legal mind, the social worker, the criminologist and the educator as well as to the physician. Eugenics, education, sexual problems, crime, feeble mindedness, alcoholism, immigration and occupational diseases are exhaustively treated from the neuro-mental standpoint, as well as other distinctly nervous and mental disorders.

There are 19 contributors to volume I, including White, A. M. Barrett, H. A. Colton, H. H. Goddard, E. E. Southard and Adolf Meyer of America, and Havelock Ellis of England.

This series will commend itself to a large class of readers as the most instructive and complete work of its kind attempted and if it receives the appreciation it deserves the books will be found in the libraries of all those interested in the study of the psychoneuroses.

Diseases of the Ear. By Philip D. Kerrison, M. D., Professor of Otology in New York Polyclinic Medical School. Cloth. 588 pages and 331 illustrations. Price, $5.00 net. Philadelphia and London: J. B. Lippincott Company, 1913.

The marked advances in diseases of the ear during the past few years warrant the addition of this carefully compiled book to the rather extensive writings on otology. The successful investigation of the static labyrinth, the influence of salvarsan on syphilis of the labyrinth and on the treatment of aural disease and the largely increased use of vaccines are three potent reasons for this book, if reasons be necessary. As a matter of fact, this is a text-book of unusual value and commends itself immediately to the discerning otologist as a helpful, conservative and highly useful volume.

Every phase of aural anatomy, physiology, surgery, diagnosis and treatment has been thoroughly covered and many illustrations illumine the well prepared text.

Dr. Kerrison is to be congratulated upon the unusual excellence of his labors.

A Reference Handbook for Nurses. By Amanda K. Beck. 3rd edition. Flexible leather. 230 pages. Illustrated. Price, $1.25 net. Philadelphia and London: W. B. Saunders Company, 1913.

This is intended to give the nurse the knowledge how to act in times of emergency when no medical assistance is available. It contains a little of almost everything and must be regarded as indispensable to the nurse who desires to carry out her obligations to the fullest extent.

(Continued on p. 22.)

THERAPEUTIC MEMORANDA.

Local Anesthesia in Removal of the Tonsils.—F. Hazlehurst, Jr. (*Maryland Medical Journal,* December, 1912), advocates the following method of anesthesia for tonsillectomy: "I inject about a dram of ½ per cent. Novocain and adrenalin 1:6000 solution into the tonsil, above, below, and in the middle. The needle is thrust into the tonsil until the feeling of resistance indicates the capsule or the wall of the tonsillar fossa. The solution is injected into the tonsil itself rather than into the pillars, as is done by many, in order to avoid possible intoxication, in view of the theoretical consideration that systemic absorption would be greater if the injection is made where the blood vessels are larger. This combination seems eminently satisfactory. I have never observed any effects on the patient which could be unmistakably due to the drugs used."

Regional Anesthesia.—Rood (*British Medical Journal,* 1912, page 1701) notes that regional anesthesia can be used for any type of operation in which the nerves are accessible. He employs a 2½ per cent. solution of Novocain in distilled water and introduces it through a fine needle down to the nerve to be anesthetized. He says the characteristics of this form of anesthesia are: 1. Granted that a suitable anesthetic solution is introduced around the trunk of a nerve, the whole area supplied by that nerve becomes anesthetic, bone, muscle, fascia, skin, etc. 2. The method can be used for operations upon inflamed tissues provided the injection around the nerve trunk be made at some point well above the septic area. 3. The anatomical relations of the part to be operated upon are not obscured by edema caused by a large quantity of injected fluid, as is sometimes the case with the wide infiltration method. 4. The anesthesia lasts several hours. 5. The anesthetic area is clearly defined by the anatomical distribution of the nerves, consequently there is no risk of suddenly overstepping the limits of the anesthesia with most unpleasant results to the patient. After employing eucaine, stovaine and Novocain, Rood finds that by far the best results come from Novocain.

Venous Anesthesia.—Dr. I. C. Chase, Fort Worth, discussing a paper before the Texas State Medical Association on local versus general anesthesia, remarked (*Texas State Journal of Medicine,* May, 1913) that the increasing use of intravenous remedies, especially Salvarsan, is accustoming the profession to intravenous infusions, and will undoubtedly lead to a wider adoption of venous anesthesia. In this work, the arm, for example, freed from blood by a rubber bandage and later kept constricted by a tourniquet, there can be injected into the vein a ½ per cent. solution of Novocain to an amount necessary to distend the veins, that is, from 10 to 100 c. c. Perfect anesthesia soon ensues. This method of anesthesia introduced by Bier is widely and deservedly used, as Novocain is believed to be the least toxic and most widely used anesthetic agent for intravenous and hypodermic use.

Novocain solutions can be sterilized by boiling, but if L-Suprarenin is added to the solution the combination should be boiled for only a minute or two. Ask manufacturers for samples of Novocain, or Novocain L-Suprarenin hypodermic tablets.—Farbwerke-Hoechst Co., New York.

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Malformation and Congenital Diseases of the Fetus. By Prof. D. R. Birnbaum, of Gottingen. Cloth, 380 pages. Illustrated. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co., 1912.

This is a very complete exposition of the subject, the most exhaustive, in fact, we have seen. After giving the causation and classification of malformations, the author takes up the malformations and congenital diseases of the fetal body from the skull to the feet, including the various organs. The chapters on monsters are comprehensive and every phase of the subject is thoroughly handled. Good illustrations add to the value of the book.

Chlorid of Lime in Sanitation. By Albert H. Hooker, Technical Director. Hooker Electrochemical Co. Cloth. Price, $3.00. 231 pages. New York: John Wiley & Sons, 1913.

The widespread use of chlorid of lime makes the appearance of this monograph very timely. The product is absolutely essential as a disinfectant and at this season of the year can be used to advantage in the prevention of fly breeding, in street sprinkling and in disinfecting milk bottles. It has an abundant use in the disposal of sewage.

The book gives many valuable methods of using this cheap and effective disinfectant.

The Interpretation of Dreams. By Prof. Dr. Sigmund Freud. Translated by A. A. Brill, M.D., of Columbia University. Cloth, 510 pages. Price, $4.00 net. New York: The Macmillan Company, 1913.

This book has been so thoroughly discussed, since its appearance in Germany some time ago that a review is almost unnecessary. Freud's dream theories are not fully accepted by the profession and some men are quite sceptical. It is reasonable to believe, however, that the dream may be the expression of some abnormal mental activity and Freud's theories appear tenable. Certain it is he has aroused considerable comment on this mystery of the mind and both the psychologist and physician are delving deeply into the subject.

It will be a treat to non-German reading medical men to read this scholarly contribution in English.

Diseases in Milk. The Remedy: Pasteurization. By Mrs. Nathan Strauss. New York: The author, 1913.

The wife of a well-known philanthropist has told of his life-saving work in an interesting and convincing manner. It is entirely worthy of the great service to mankind it portrays.

The Health-Care of the Baby. By Louis Fischer, M. D., author of "Infant Feeding in Health and Disease," etc. Fourth revised edition. Cloth. 12mo, 148 pages. Price, 75 cents net; by mail, 83 cents. New York: Funk & Wagnalls Company, 1913.

This edition brings Dr. Fischer's previous writings on this subject up to date. The book is intended for mothers and nurses and is admirably suited to their needs.

How to Collect a Doctor's Bill. By Frank P. Davis, M. D. Cloth. 98 pages. Price, $1.00 net. Published by Physicians' Drug News Company, Newark, N. J. This little book gives various form letters and the laws on collections in various states, together with good advice. It is a helpful assistant.

A Reference Hand-Book of Gynecology for Nurses. By Catherine Macfarlane, M. D., Gynecologist to the Woman's Hospital, of Philadelphia. Second edition, thoroughly revised. 32mo of 156 pages, with original line drawings. Flexible leather. Price, $1.25 net. Philadelphia and London: W. B. Saunders Company, 1913.

This is a veritable *vade mecum* of needed information. It takes up the many necessary details of the nurses' duties in the gynecological operating and sick room and is replete with those points on which the nurse should be thoroughly grounded.

Medical Union Number Six. By William Harvey King, author of My Smoking Room Companion. Cloth. 60 pages. Price, 50c. Published in 1913 by Boericke & Tafel, Philadelphia. This is a well told narrative of the unionism of the medical profession twenty-five years hence and is on a par with the author's previous tales.

Wayside Experiences. By C. Elton Blanchard, M. D. Cloth. 246 pages. Price, $1.25 net. Published by Physicians Drug News Company, Newark, N. J. This is an interesting series of stories, each with a moral, which will help to while away a pleasant evening.

BOOKS RECEIVED.

All books received will be acknowledged in this column, and those which warrant further notice will be given a more extended review in a later issue.

Blood-Pressure, From the Clinical Standpoint. By Francis Ashley Faught, M. D., of the Medico-Chirurgical College, Philadelphia. Octavo of 281 pages. Illustrated. Published in 1913 by W. B. Saunders Company, Philadelphia and London. Price, $3.00 net.

Narcotic Drug Diseases and Allied Ailments. By George E. Pettey, M. D., of Memphis. Cloth. 520 pages. Price, $5.00 net. Published in 1913 by F. A. Davis Company, Philadelphia.

Vaccine and Serum Therapy. By Edwin H. Schorer, M. D., Dr. P. H., formerly of Rockefeller Institute. Cloth. 291 pages. Illustrated. Price, $3.00 net. Published in 1913 by C. V. Mosby Company, St. Louis.

Surgery of the Eye. By Ervin Torok, M. D., and Gerald H. Grout, M. D., of the New York Opthalmic and Aural Institute. Cloth. 507 pages. Illustrated. Price, $4.50 net. Published in 1913 by Lea & Febiger, Philadelphia and New York.

Bovine Tuberculosis and Its Control. By Veranus A. Moore, M. D., V. M D., Professor in New York State Veterinary College at Cornell University. Cloth. 134 pages and 30 full page illustrations. Price, $2.00 net. Published in 1913 by Carpenter & Co., Ithaca, N. Y.

Massage—Its Principles and Technic. By Max Bohm, M. D., of Berlin, Germany. Edited, with an introduction, by Charles F. Painter, M. D., Professor of Orthopedic Surgery at Tufts Medical School, Boston. Octavo of 91 pages, with 97 illustrations. Cloth. Price, $1.75 net. Published in 1913 by W. B. Saunders Company, Philadelphia and London.

The Influence of Monarchs. By Frederick A. Woods, M. D., of Massachusetts Institute of Technology. Cloth. 425 pages. Price, $2.00 net. Published in 1913 by the Macmillan Company, New York.

Golden Rules of Diagnosis and Treatment of Diseases. By Henry A. Cables, M. D. Second Edition. Cloth. 318 pages. Price, $2.25 net. Published in 1913 by C. V. Mosby Company, St. Louis.

(Continued on p. 24.)

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good advice. It is a helpful assistant.

Golden Rules of Gynecology. By George B. Norberg, M. D., Professor of Diseases of Women and Clinical Gynecology, University Medical College, Kansas City. 250 pages. Octavo. Price, $2.25. Published in 1913 by C. V. Mosby Company, St. Louis.

Muller's Serodiagnostic Methods. Translated by Ross C. Whitman, M. D., of the University of Colorado. Cloth. 146 pages. Illustrated. Published in 1913 by J. B. Lippincott Company, Philadelphia.

Applied Bacteriology for Nurses. By Charles F. Bolduan, M. D., Assistant to the General Medical Officer, Department of Health, City of New York, and Marie Grund, M. D., Bacteriologist, Department of Health, City of New York. Cloth. 12mo of 166 pages, illustrated. Price, $1.25 net. Published in 1913 by W. B. Saunders Company, Philadelphia and London.

Diet Lists of the Presbyterian Hospital, New York City. Compiled, with notes, by Herbert S. Carter, M. D., Assistant Visiting Physician to the Presbyterian Hospital, Associate in Medicine at Columbia University, etc. Cloth. 12mo of 129 pages. Price, $1.00 net. Published in 1913 by W. B. Saunders Company, Philadelphia and London.

JULY CLINICS NEW YORK DEPARTMENT OF PUBLIC CHARITIES.

MONDAYS.

Cumberland Street Hospital (Brooklyn)—
- Surgery ..... Dr. Walmsey .... 3:00 P.M.
- Laryngology and Rhinology.... Dr. Stewart ..... 4:00 P.M.
- Oral Surgery..... Dr. Shea ..... 4:30 P.M.

Kings County Hospital (Brooklyn)—
- Gynecology ..... Dr. McNaughton 9:00 A.M.

TUESDAYS.

Neurological Hospital—
- Neurology ..... Dr. Byrne ..... 9:00 A.M.

Cumberland Street Hospital (Brooklyn)—
- Gynecology ..... Dr. Burnham .... 1:00 P.M.
- Ophthalmology and Otology... Dr. Warner ..... 3:00 P.M.
- Surgery ..... Dr. Iler ..... 3:00 P.M.

Kings County Hospital (Brooklyn)—
- Surgery ..... Dr. Barber .....11:00 A.M.
- Genitourinary Surgery..... Dr. Morton ..... 2:00 P.M.
- Genitourinary Surgery..... Dr. Fraser ..... 2:00 P.M.

WEDNESDAYS.

City Hospital—
- Genitourinary Surgery..... Dr. Fuller ..... 2:00 P.M.
- Obstetrics ..... Dr. Shears ..... 2:00 P.M.

Neurological Hospital—
- Neurology ..... Dr. Maloney ....10:00 A.M.

Kings County Hospital (Brooklyn)—
- Dermatology ..... Dr. Winfield .... 1:00 P.M.
- Orthopedics ..... Dr. Truslow .... 9:00 A.M.
- Orthopedics ..... Dr. Napier ..... 2:00 P.M.

Coney Island Hospital—
- Pediatrics ..... Drs. Beck and McQuillan ..... 3:30 P.M.
- Pediatrics ..... Drs. Pendleton and Van Wart..... 3:30 P.M.

THURSDAYS.

City Hospital—
- Gynecology ..... Dr. Stearns ..... 2:00 P.M.

Cumberland Street Hospital (Brooklyn)—
- Gynecology ..... Dr. Burnham .... 1:00 P.M.
- Surgery ..... Dr. Walmsey .... 3:00 P.M.
- Laryngology and Rhinology... Dr. Stewart ..... 4:00 P.M.

Kings County Hospital (Brooklyn)—
- Otology ..... Dr. Alderton .... 1:00 P.M.
- Surgery ..... Dr. Barber ..... 2:00 P.M.

Coney Island Hospital—
- Gynecology ..... Drs. McEvitt and Mills .....10:30 A.M.
- Gynecology ..... Drs. Mayne and Rankin .....10:30 A.M.
- Surgery ..... Drs. Fiske and Bogart ..... 3:00 P.M.
- Surgery ..... Drs. Murphy and Lack ..... 3:00 P.M.

(*Continued on p. 27.*)

Physicians' Patients

may be sent to MUDLAVIA with the full assurance that they will be as well taken care of as though their physician accompanied them. We appreciate the co-operation of the physician and are glad to receive his advice, and report to him the condition of patients that he may send to us.

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Laryngology and Rhinology...Dr. Dougherty .. 2:30 P.M.
Neurological Hospital—
Neurology .....Dr. Abrahamson 9:00 A.M.
Cumberland Street Hospital (Brooklyn)—
Ophthalmology and Otology...Dr. Warner ..... 3:00 P.M.
Surgery .....Dr. Iler ..... 3:00 P.M.
Oral Surgery.....Dr. Shea ..... 4:30 P.M.
Kings County Hospital (Brooklyn)—
Gynecology .....Dr. McNaughton 9:00 A.M.

SATURDAYS.

Neurological Hospital—
Neurology .....Dr. Walsh ..... 2:00 P.M.
Kings County Hospital (Brooklyn)—
Kings County Hospital—
Surgery .....Dr. Barber .....11:00 A.M.

Dressings in Suppurating Wounds.

The healing of suppurating wounds may be expedited in a marked degree by the use of ECTHOL (Battle). In addition to a germicidal influence it adds to cellular resistance, as a result of which the luxuriant germ growth becomes inhibited, until finally the purulent process becomes reduced to the point where the resistance of the involved tissues turns the tide toward healthy granulation. Where such wounds are of more than ordinary size or severity, the internal administration of ECTHOL has proven a most useful adjunct to the local treatment.

Whooping Cough More Fatal Than Believed.

Of the three children's diseases—measles, scarlet fever and whooping cough—the last mentioned caused more deaths during the period 1906 to 1910 than either of the others. For 1911 there were returned for the registration area 6,682 deaths, corresponding to a death rate of 11.3 per 100,000 population. The States showing the highest death rates from whooping cough in 1911 were Rhode Island, 21.7, and Kentucky, 19. The North Carolina municipalities had a high rate, 46.2; and of the cities of 100,000 population and over in 1910, the highest rates for 1911 were those of Nashville, 33.2; Richmond, 31.7; New Orleans, 28.1; Atlanta, 24.3; and Cambridge, 22.5—all except the last, Southern cities with large negro populations.

Death Rate in Diphtheria and Croup.

To some extent a children's disease, but with a wider range of age incidence than measles, scarlet fever or whooping cough, diphtheria caused nearly twice as many deaths in 1911 as any of the other three. The death rate was 18.9 per 100,000 population, the lowest since the beginning of the series of annual reports in 1900. The rate for that year was 43.3, but it has fallen steadily with only slight interruptions until it is now less than one-half its height at the beginning of the last decade. Among the States with the highest death rates from diphtheria in 1911 were Pennsylvania, 27; Rhode Island, 25.6; Kentucky, 24.8; Utah, 22.1, and Connecticut, 21.9.

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Hardly any of the patients who consult the general practitioner give him more worry and trouble than those who come to him complaining of "heart weakness." Careful examination, while disclosing no organic lesion, almost always shows varying degrees of functional disturbance. Palpitation, arrhymia, precordial pain, dyspnea, and a wide variety of other symptoms are present most of the time to keep the patient in a state of constant apprehension. Obviously, at the very outset, it is essential to remove all contributory causes as completely as possible. The digestive and eliminative functions call for appropriate treatment, and especial attention should be directed to the diet.

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